THE SMART REPORT

Substance Abuse and Canadian Youth

Reginald G. Smart

ARF Addiction Research Foundation
Fondation de la recherche sur la toxicomanie

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Printed and bound in Canada.

ISBN 0-88868-207-7

Addiction Research Foundation
33 Russell Street
Toronto, Ontario
M5S 2S1

Preface

Alcohol and drugs continue to create major problems for youth in Canada. The current problems with drugs began only in the late 1960s when cannabis became available. However, alcohol has created problems for youth since the early days of the first settlements. Youth have their own problems with alcohol and drugs but often become the victims of other people's drug use through family violence and family pressures to use alcohol and drugs as coping mechanisms.

Despite our problems with alcohol and drugs, much has been done to prevent and treat such problems in Canada. Through its provincial and federal health agencies, Canada has become a world leader in research on addictions and the provision of treatment.

With regard to legal approaches, Canada seems to be moving slowly away from the usual dependence on a "law and order" approach and towards harm reduction and social control approaches. The aim of this book is to describe youthful alcohol and drug problems in Canada and the approaches we have taken to prevent and solve them. Despite the many efforts to solve such problems there is no one source of information on them. Most Canadian books focus exclusively on drugs other than alcohol; American books may provide some information on alcohol but none on Canadian youth. This book should be a single source for those seeking information on youthful alcohol and drug problems in Canada.

The author wishes to acknowledge the help of Jule Webb for typing the manuscript; Edward Adlaf and Gordon Walsh for their long collaboration in much of the research reported here; and Robert Mann, Patricia Erickson and Robin Room for reading parts of the book at different stages.

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Chapter 1

Why the Concern About Youthful Drinking and Drug Use?

In our youth-oriented society, everything that young people do seems important — more important than if middle-aged or older people do it. We have come to focus on youth as extensions of ourselves and as our hope for the future. They are the carriers of our biological heritage, our family values and our larger socio-cultural traditions. We hope that they will maintain and enhance all of them for later generations. Many of us also hope that youth will deal better with problems that our generation botched. There is often the feeling that if we can only get a better next generation, then the major problems of society will disappear or at least decrease.

Our youth represent whatever hope there might be for future and better societies. Their vulnerability to problems such as those posed by alcohol and drugs — and their solutions to them — will greatly determine what happens to later generations as well as their own.

We know that youth are especially at risk for alcohol and drug problems, both from their own use and that of other people. Many research studies have shown that youth have a low tolerance for alcohol and for other drugs (Kalant et al., 1977; Smart, 1980). Youth are involved in traffic accidents at lower alcohol levels than adults (Hyman, 1968). They can have an elevated risk of accidents after one or two drinks of alcohol, whereas most adults show this risk only after three or four drinks. Older drinkers acquire tolerance to alcohol, which makes them more able to handle its effects without being obviously impaired. The same is true for many other drugs such as tranquillizers, sleeping pills and even illicit drugs such as cannabis. Because most

young people have little experience with these drugs, their impact on youth will be greater.

Drug use by family members also puts young people at risk of drug problems. Youth often become the victims in families where parents abuse alcohol or drugs. They may become victims of physical and sexual abuse or a myriad of social and economic dislocations (Smart et al., 1990a; Graham and Koren, 1991). Of course, drug-abusing parents may expose unborn children to gross birth defects and subtle developmental handicaps due to *in utero* drug influences. Additionally, alcohol-abusing parents may transmit genes associated with alcohol-abuse potential to their children. Although this is a controversial research area, much evidence suggests a genetic factor for alcohol and some other types of drug abuse (Cloninger, 1992).

Youth represent a large segment of Canadian society. At present 35.4% of Canadians are younger than 25. Although that segment has been shrinking somewhat lately, it is still substantial. As the population ages, we become even more dependent on fewer young people to provide the labor, social skills and family life to support society and the lifestyles of the older population.

Concern with youthful drinking and drug use is very recent. It is almost impossible to find papers on youthful drinking published before 1950. When most of today's elderly were in high school, drinking or drug use simply did not exist as school problems. Those few drinkers who did arise seemed to disappear very quickly after disciplinary action. The same is true of drugs such as cannabis and cocaine. Cannabis came to Toronto as a recreational drug in the 1950s (see Smart, 1983 for a history) but was not seen in most Canadian high schools until the 1960s. Cocaine did not arrive until the 1980s and crack came to Canada only in 1986. Because we have been dealing with youthful drug use for a short period of time, we have not yet found solutions. Forty years may seem like a long time, but most social problems — such as

delinquency, poverty and family breakdown — have been with us much longer, and efforts to solve them have met with little success.

Even during the heaviest drinking phase of the last century, prior to Prohibition in North America and elsewhere, there appears to have been no special worry about young people's habits. Temperance books and documents from that time (see Smart and Ogborne, 1986 for a review) rarely mentioned drinking or drinking problems among youth. There was a passing concern that very young people drank; however, the main focus was on the older male and how his drinking would affect his work productivity. The effect on family life was less important. Parental drinking was seen to cause neglect, beatings and economic hardship. There was also some recognition of genetic influences related to drinking but no scientific studies to settle the issue.

The temperance concern about youth was that children could enter taverns and bars and buy alcoholic beverages to take home for their parents. Up until 1886, children under 13 in England could buy any alcoholic beverage but there appeared to be little concern about their drinking. In 1918, a law was passed to prevent sales of beer to those under 14 and liquor except "in corked and sealed vessels in quantities not less than one reputed pint," and for "off-premise" consumption.

Why a Book About Youthful Drinking and Drug Use?

Several recent books have appeared on drug use in Canada (Hagan, 1984; Blackwell and Erickson, 1988; Alexander, 1991; Boyd, 1991). For the most part, these books deal with drugs more often used by adults and with the social policies meant chiefly to control adult drug use. They do not review social, educational or community development programs for youth. Nor do they deal with treatment or policy issues of special concern to youth.

Alcohol and drug use among youth is, of course, very different than that among adults. The last book describing alcohol use in detail by Canadian young people was

published in 1980 and the last book on youthful drug use was published in 1983. Although many reports and surveys have been published, no major treatises have been recently devoted to youthful drug use in Canada. Since these books described above were published, new research studies have been done on all manner of youth drug problems. There have been a variety of surveys and studies of high-risk groups such as street youth, dropouts and youth in transition. In addition, new laws and policies that directly affect young people have come into place. For example, .05 random breath test laws have been enacted in several provinces. On the national level, the Young Offenders Act has come into force. Also, a variety of mass media programs dissuading people from drug use have achieved prominence. Many famous people have admitted their alcohol or drug use and have spoken of the need for recovery and prevention programs. Many boards of education have brought school drug and alcohol education programs into classrooms, and have established policies that deal with student alcohol and drug use. Finally, Canada's National Drug Strategy was developed in 1989 and programs based on it have come into place. In summary, a wide variety of events over the past 10 years can be expected to have a major impact on youthful drinking and drug use.

Young people are much heavier users of illicit drugs such as cannabis, cocaine and crack than are adults. On the other hand, they use less tobacco and have fewer problems related to it than do middle-aged or elderly people. Also, young people's drinking is different than that of older persons. Young people may be less likely to drink and are certainly less likely to drink daily. However, many youth tend to drink heavily in party or social situations. They want and expect to get drunk when they drink, unlike most adults. Because of all these factors associated with drug use patterns, youth represent a special problem for policymakers, educators and any professionals who seek to provide care or prevention.

Because youth are typically in school and in family situations, most prevention and treatment efforts will be different than for adults. Programs based on work situations, drinking-driving law enforcement or drinking establishments will probably be less important for youth than for older adults. This is especially true for younger people who do not work or drive or drink in bars. They must be reached through school, family or recreational systems if they are to be reached at all. Different approaches to youthful drinking must therefore be considered.

The Aims of this Book

The main aims of this book are to review and analyze data and experiences related to youthful drug and alcohol abuse in Canada. For the purposes of this book, youth are taken to be younger than 25. That may seem an over-inclusive category that would include many young adults. However, many youth clinics and other treatment facilities take people up to age 24. Also, surveys and special studies of youth include such people. Census data can be obtained for the category age 20-24 and hence many drinking and drug use surveys include that age group, as well as younger people. The focus of this book is on the last 10 years or so, rather than the whole history of alcohol and drug use in Canada. Much of that is well covered in previous works (Smart, 1983; Smart and Ogborne, 1986; Blackwell and Erickson, 1988) and does not need repetition. The studies and experiences reviewed are primarily Canadian. Minimal reference will be made to studies done in the United States or in other countries unless they are the only ones available. Many books about youthful drug use in the United States have been published.

The detailed aims of this book are to:

(i) describe the nature and extent of alcohol and drug use and the attendant problems among Canadian youth. The emphasis here is on the past 10 years and trends in that period;

(ii) examine the efforts of governments, schools, parents and other agents and agencies to prevent and ameliorate drinking and drug problems among youth in Canada;

(iii) review the efforts to provide treatment and rehabilitation for Canadian young people with alcohol and drug problems; and

(iv) make some conclusions about the best policy, prevention and treatment initiatives for the future.

Before beginning these tasks it is useful to examine the context of youthful drinking and drug use, i.e., drinking and drug use by adults in Canada and elsewhere and trends in that use.

Current Drinking and Drinking Problems in Canada

The broader context for youthful drinking is, of course, our larger society — the values held about drinking by people in general and parents in particular. All youth grow up exposed to certain family drinking patterns and with an awareness of how people around them usually drink. The Canadian drinking context is one of heavy drinking at party and festival times but not much daily drinking.

Alcohol consumption in Canada in 1990, among people older than 15, was about 9.54 litres of absolute alcohol per capita. That represents about 556 drinks of alcohol per year for every person aged 15 and over, or about 1.5 drinks per day, with a drink being a bottle of regular (not light) beer, a glass of wine or a shot of whiskey or other spirits. Of course, some people drink far more than that and many drink less. Alcohol consumption is lowest in Saskatchewan (8.01 litres) and Prince Edward Island (8.04 litres), and highest in the Yukon (17.37 litres) and the North West Territories (12.42 litres). Ontario, British Columbia and Newfoundland are close to the average, but a little higher. Per capita alcohol consumption has been declining in Canada since about 1975.

A recent national survey of adult alcohol and drug use (Eliany et al., 1992) clearly shows the differences in drinking in different segments of Canadian society. Only 7% never drank. About 84% of men over age 15 (and 72% of women) drank currently. Drinking rates increase up to about age 25 and then decline after that: of those over 65, only 46% of women and 65% of men are current drinkers. The highest rates of drinking are among those aged 20-24. They also consume more drinks per occasion (3.9) than older people (fewer than two). Figure 1 shows the number of drinks per week reportedly taken by men and women. Far more men drank 8-15 drinks in the weeks before the survey, and far fewer had not had any drinks at all.

Alcohol consumption is also associated with other social and demographic characteristics. For example, consumption is higher among those with higher education levels, e.g., high school or post high school education and, not surprisingly, with higher income levels. Alcohol consumption is also more common among those who are employed (82% are current drinkers) and students (77%) and least common among housekeepers (63%) and retired people (59%). Differences for marital status are also striking. Widowed people are less often drinkers. However, separated, divorced and single drinkers consume more drinks per week (5.2) than those who are married (3.4 drinks). Differences for language are not very important.

Some idea of the downward trend in alcohol consumption can be gained from the national study in Table 1. Since 1978, the proportion of former drinkers has greatly increased (from 4% to 15%). At the same time the proportion of occasional drinkers has increased and that of more frequent drinkers has decreased (67% to 52%).

Alcohol problems are often reported by Canadian drinkers. In our recent survey in Ontario (Adlaf and Smart, 1991), we asked about four problems on the CAGE scale known to predict serious drinking problems. Respondents were asked: (1) have you ever felt you should cut down on your drinking; (2) have people annoyed you by criticizing your drinking; (3) have you ever felt bad or guilty because of your

drinking; (4) have you ever had a drink first thing in the morning to steady your nerves or get rid of a hangover? When people answer yes to two or more items, it is a sign of serious problems. The frequency of people with two or more problems is shown in Figure 2. Almost 12% of males and 6% of females reported two or more problems. The rates were not very different for the age groups, except that fewer people aged 65 and over reported two or more problems. Single and "living as married" people reported the most problems; married people reported the fewest. Those speaking English as a first language had far greater problems than those not speaking English as a first language.

In general, the results show that youth are exposed to considerable drinking in their families. Rates of drinking are highest in families where parents are well educated and have high incomes, and among divorced or separated parents. Drinking problems occur in at least one out of eight families and especially in families where parents are "living as married" or single. Those families become the high risk ones for young people developing drinking problems.

The International Context of Drinking

Another context for youthful drinking involves recent world trends in drinking, some of which have been very striking. We saw earlier that drinking levels have been decreasing in Canada recently. In most countries in the world that keep good data, alcohol consumption was seen to increase greatly after World War II. In Canada and many other countries, consumption doubled between 1950 and 1975. However, in the mid-1970s alcohol consumption stabilized and even declined in many countries, including Canada. More recent data for 1980 and 1990 are shown for 32 countries (mainly developed) in Table 2. One can see that Canada in 1990 has a consumption rate of about 7.5 litres per person (all ages). That puts Canada in about 20th place (tied with the U.S.) out of 32; hence we are not among the highest consumers of

alcohol. Also, alcohol consumption declined in Canada by about 14% between 1980 and 1990. About half of the 32 countries showed some decline and Canada's 14% is among the largest. The international data thus show that Canada's alcohol consumption is relatively low for developed countries and has been declining recently. This is probably due to general lifestyle changes, including better eating habits (less fat consumption), more exercise and greater interest in health (Smart, 1987). As well, economic changes have left people with less disposable income to spend on drinking. All of these factors should tend to decrease drinking among youth.

Adult Smoking in Canada

A special report on the smoking behavior of Canadians was published in 1992 (Eliany and Courtemanche, 1992). It described data from the national study of 1989 and made comparisons with earlier surveys. About 33.4% of men and 30.5% of women were smokers in 1989. About 64.2% smoked 11 to 25 cigarettes per day and 9.8% smoked 20 or more per day. Tobacco use was highest in Newfoundland and Quebec and lowest in British Columbia. There have been large declines in overall smoking rates since 1965 (50% to 32%); however, the number of cigarettes smoked by regular smokers has not changed. Smoking has decreased more among those aged 15 to 19 than among any other group. Smoking rates increased as education and income levels decreased. It appears that smoking is rapidly becoming a habit of the poorest people in the poorest provinces in Canada.

Current Drug Use in Canada

We usually have less information about adult drug use, at least from surveys. Rates of illicit drug use are typically low among adults and many surveys do not include them. However, the 1989 National Survey did include drugs. Some 23.2% of Canadian

adults had used cannabis in their lifetime and 6.5% were current users. Only 3.5% had used cocaine and 1.5% were current users. Both drugs were used more often by men and by persons in the age ranges 20 to 34. About 5.7% reported taking codeine, morphine or demerol in the 30 days prior to the survey. About 3.6% used sleeping pills and 3.1% used tranquillizers in the same period. These rates may seem low but Canada is the second heaviest user of codeine in the world. Much of that would be in the form of non-prescription painkillers.

There were considerable regional variations in drug use. Cannabis use was highest in British Columbia, Alberta, Quebec and Nova Scotia, and lowest in the other Maritime provinces. Cocaine was much higher in British Columbia than elsewhere, followed by Quebec and Alberta. Rates of cocaine use were much lower in all Maritime provinces. The best picture of trends in adult drug use can be obtained from the surveys done in Ontario between 1977 and 1991. The data in Figure 3 show a long term decline in tranquillizer use and more recent declines in the use of cannabis, sleeping pills and stimulants. However, there is no decline in cocaine use.

In general, the drug use data show, as do those for alcohol, that Canadians are becoming more cautious and conservative about drug use. Many drug problems remain but youth are now raised in a society with declining involvement in drinking, smoking and drug use. Youth, partly because of their inexperience, are especially sensitive to drug and alcohol effects. In this book I try to outline the problems of youth with alcohol and drugs and the best preventive and treatment efforts for solving them.

Figure 1
Number of Drinks Consumed in the Week Preceding the Survey, by Sex, Age 15+, Canada, 1989

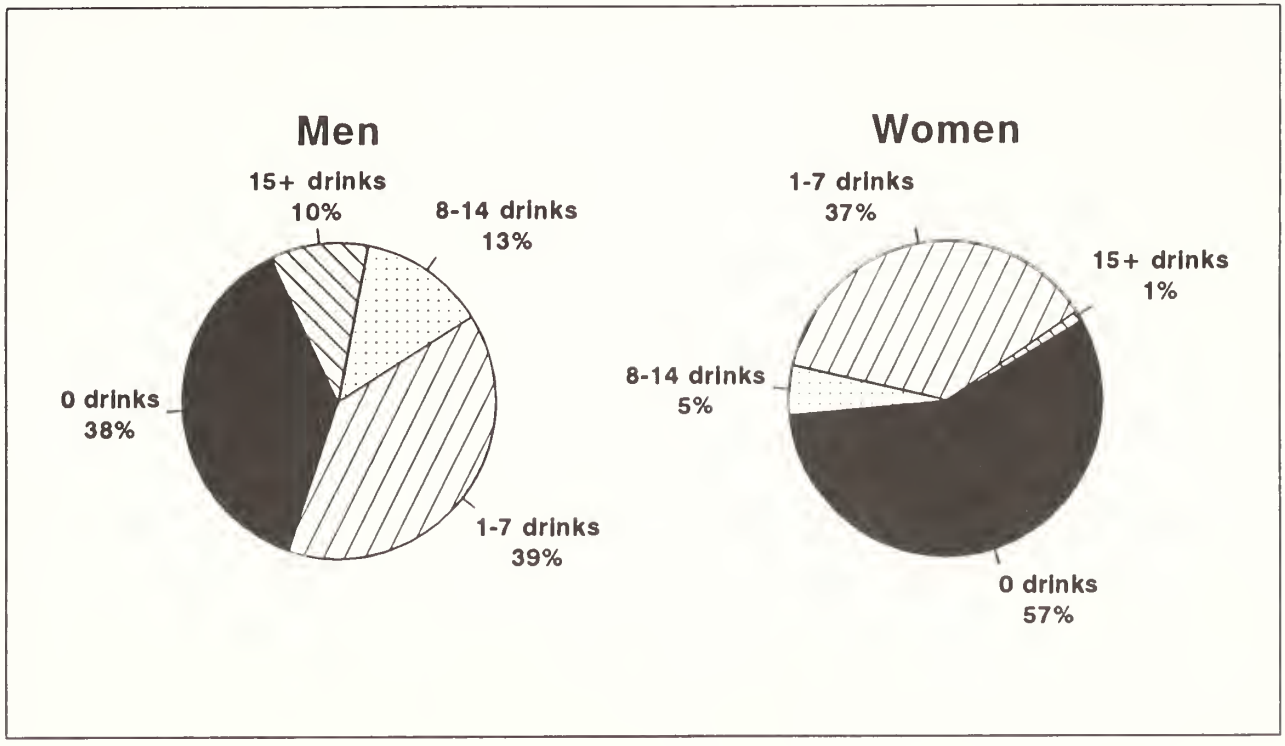


Table 1

Types of Drinkers, Age 15+, Canada, 1978/1979[1], 1985[2] and 1989[3]

Type of Drinker	1978/1979	1985	1989
Never Drank	13%	8%	7%
Former Drinker (used to drink, but has not had a drink in the last 12 months)	4%	10%	15%
Current Drinker (consumed alcohol in the past 12 months preceding the survey)	82%	81%	78%
Of Current Drinkers:			
Occasional Drinker (drinks alcohol less than once per month)	15%	20%	26%
Frequent Drinker (drinks alcohol at least once per month)	67%	61%	52%

1 Canada Health Survey (Health and Welfare Canada, 1981)
2 Canada's Health Promotion Survey (Health and Welfare Canada, 1988)
3 National Alcohol and Other Drugs Survey (Health and Welfare Canada, 1990)

Table 2

Total Litres of Absolute Alcohol Consumed Per Capita in 32 Countries 1980 and 1990

	Absolute Litres 1980	Litres 1990	% Change
Canada	8.7	7.8	-14
Australia	9.7	8.0	- 3
Austria	10.0	10.3	- 6
Belgium	10.8	9.9	- 8
Bulgaria	8.7	9.9	+ 7
Cuba	7.2	3.9	+55
Cyprus	4.7	7.7	+64
Czechoslovakia	9.6	8.8	+ 8
Denmark	9.1	9.9	+10
Finland	6.4	7.7	+20
France	11.9	12.7	-15
Germany FRG	11.4	10.6	- 7
Hungary	10.8	10.8	- 3
Iceland	3.9	3.9	0
Ireland	7.3	7.2	- 8
Italy	13.0	8.7	-33
Japan	5.4	6.5	+20
Luxembourg	10.9	12.2	+12
Netherlands	8.9	8.2	- 7
New Zealand	9.6	7.8	-19
Norway	4.6	4.1	-11
Poland	5.7	8.2	-29
Portugal	11.0	9.9	-11
Romania	9.6	7.6	- 5
South Africa	3.7	4.8	+30
Soviet Union	8.2	8.7	-40
Spain	13.6	10.8	-21
Sweden	5.7	5.9	- 4
Switzerland	10.8	10.8	0
United Kingdom	7.3	7.6	+ 6
Uruguay	6.1	6.4	+ 5
United States	8.2	7.5	-16

Source: World Drink Trends 1992. Productschap voor Gestilleerde Dranken, 1992, Schiedam, Netherlands

Chapter 2

How Many Young People Drink And Why?

When more than three-quarters of adults are current drinkers, we must expect that most young people will also drink. Drinking represents growing up to many young people. Having an illegal drink or getting drunk is a rite of passage few want to miss. We know from research in the U.S. that early drinking is associated with early drug use and early sexual activity (Jessor and Jessor, 1977). Drinking alcohol to excess marks a type of independence from parents that is hard to equal. Parents have great difficulty supervising most drinking activities, especially in an era when young people so often have access to cars.

Accounts from the last century show that few Canadian youth drank alcoholic beverages, although we do not have any empirical studies for that time. Even during parties, barn-raisings and harvesting bees — when adults drank enormous amounts — Victorian young people did not seem to drink (Moodie, 1980; Smart and Ogborne, 1986; Howay, 1942). In those days, young people often did not drink until they left home and became independent. Only in the mid-20th century did it become fashionable for young people to drink alcohol. Real problems from drinking were seen in our schools only in the 1950s. Most school personnel seem to believe that these problems have greatly increased in the past 20 years or so. Of course, in the earlier days the legal drinking age was 21 and it was well enforced. In the early 1970s most provinces lowered the drinking age to 18 or 19. Much evidence shows that reducing the drinking age increased drinking — and drinking and driving — by the young people affected (Vingilis and Smart, 1981; Smart and Goodstadt, 1977).

Some Problems in Studying Youthful Drinking

Most young people's drinking, especially that of adolescents, is surreptitious; some of it is illegal or against parental rules and much of it is not easy to observe. Direct observation studies of drinking in Canada are generally conducted in taverns and bars, where most of those observed are not youth (Single and Storm, 1985).

Much of what we know about youthful drinking comes from surveys, whose accuracy leaves much to be desired. The value of any survey result depends greatly on how well the sampling was done and how truthfully people answer the questions. In most surveys it is difficult to find everyone you want. It is especially difficult to find young males to interview and one reason is that some are out drinking. One of our best surveys, the National Alcohol and Drug Survey (Eliany, 1992), achieved a 79% response rate for telephone interviews. This survey estimates that Canadians, on average, have only about 3.7 drinks per week. However, sales data show that we drink about 10 drinks per week. Research shows that most surveys only account for 30-50% of alcohol sold — probably because heavy consumers under-report their drinking (Pernanen, 1974). We don't know whether this is the same for young people but it probably is. Our studies of the validity of student drug survey responses show that it is good but there is some under-reporting (Smart and Jarvis, 1981).

Some of the problems in under-reporting probably occur, too, because young males are under-surveyed. The National Survey used weightings to counteract the problem: the missing people's responses were counted more often. Young males were given a weighting of 2.4 and older women a weighting of .7. That suggests that about 40% of young males were missing from the survey. The heavier weighting for those who were interviewed will compensate only if those young males interviewed were similar in their drinking to those who were missed. If, indeed, some young males were out drinking in bars when the interviewer called, they are probably the heavier drinkers. Losing them causes under-reporting of drinking and drinking problems. All

of this suggests that we should view survey results cautiously. We should see them as minimal reports on youthful drinking but the best we have. Probably they are better estimates for the whys, wheres and whens of drinking than the absolute levels of alcohol consumed.

Drinking Levels in Canadian Surveys

In the past 10 years or so there has been a plethora of Canadian drinking studies. Several national surveys have been done and many provincial or local surveys. Students in high schools are particularly well studied. Studies of special high-risk groups such as street youth, cocaine users in the community and people in treatment have also been done. Many of these include information on drinking problems, attitudes to drinking or reasons for drinking. Hence they go well beyond the usual counting of numbers of drinks.

There are too many studies of youthful drinking in Canada to include them all. However, Table 3 shows data from the largest studies and some of the smaller ones as well. These studies were done in different years. Many of them have different methodologies and ways of asking the questions. We therefore make our comparisons tentatively.

The three national studies give similar results on overall rates of drinking. All studies show that the younger age groups have fewer drinkers. Only half of those aged 12-14 in Garceau's study (1985) were drinkers, compared to 81% of those aged 15-17 and 90% of those aged 20-24. These rates are not remarkably different for the National Study in 1989. Somewhat more young people drink than older people.

The various provincial studies show that about 60 to 70% of students drink, depending upon the year of the study and where it was done. Only in the study of Catholic students in Montreal (Desranleau, 1984) is the proportion of consumers below 50%. The latest study in 1991 in Ontario shows a somewhat lower rate of

drinking, but drinking among youth has been declining. We have few published studies of Canadian university and college students but Gliksman (1989) in Ontario found that 98.6% were drinkers and Mathieson et al. (1992) found that 94.8% were drinkers. About 90% of those aged 20-24 in the national survey drank alcoholic beverages. Those aged 20-24 drank four times as many drinks as those aged 15-16. Generally there is a large increase in proportion of drinkers between the ages 15-19 and 20-24. By that time nearly all Canadians are drinking, many of them heavily. Many young people have problems making the transition from student to adult and that seems to lead to more dependence on alcohol. However, we know little about why this transition so often fails and leads to alcohol problems.

Young people usually drink infrequently, but this is less true of the 20-24 age group. In the 1989 National Study, only 21.5% of young people (aged 15-24) drank as often as twice a week. However, about three times as many aged 20-24 as aged 15-16 drank twice a week or more. In the British Columbia and Ontario studies 15-20% of students drank weekly or more. Almost all studies, including the National Studies and those in P.E.I. and Ontario, show that 1% or fewer students are daily drinkers. This is a very low rate compared to adults, of whom 8-10% are daily drinkers. This is true even with university students, of whom only 1% drank daily. Generally the pattern for young people is infrequent drinking but of relatively large amounts, but we will return to that issue later.

Canadian students usually start drinking at about 13 or 14 — a little higher for girls. In our Ontario school study we found that the average grade when students first started to drink was 6.2 in 1977 (about 13 years old) but 7.6 (about 14.5) in 1991. Age of first drinking, therefore, has increased substantially. Nearly everyone who is going to drink has started by Grade 11 (75% vs. 84.1% in Grade 13). The largest change in drinking occurs between Grade 7 and Grade 8 or 9. In P.E.I. only 26.5% drank in Grade 7 but 56.2% in Grade 8. In Ontario, too, the proportion of drinkers

nearly doubles between Grade 7 and Grade 9 (30.1% to 55.7%). These findings show that special attention should be paid by teachers and parents to students exposed to alcohol around age 13 to 14. Education programs in schools are often aimed at that age group to reduce the risks of early, uncontrolled drinking.

Most studies find that male and female youth are equally likely to drink. However, males are much more likely to be heavy and frequent drinkers. For example, in the 1989 National Study, 76% of males and 72.4% of females aged 15-19 were current drinkers but males had twice as many drinks per week (3.1 vs. 1.5). In our school study 58.1% of males and 59.4% of females drank in the past year. However, five times as many males drank daily.

Drinking in High-Risk Groups

Overall rates of drinking among Canadian youth are relatively low. Most drink but few drink daily or even very heavily. However, there are many high-risk groups whose members drink much more. Some data from these groups are shown in Table 3. Street youth in three studies have had high rates of drinking (Radford, et al., 1988; Smart et al., 1990; 1992) and 6 to 9% are daily drinkers compared to 1 to 2% for general samples. Among cocaine users in the community, 98.2% were drinkers and nearly a third drank every day (Erickson et al., 1987). Also, student groups using crack and cocaine (Smart, 1988) both contained far more drinkers than non-cocaine using students. All drug sellers (Smart et al., 1992) in our student study were drinkers. We should remember that although these groups may be small in size there are many of them in every large city. They represent a special problem because of their drinking. Of course, very few would be found in household or telephone surveys, hence we have even more reason to think survey data under-report heavy drinking among young people.

How Many Young People Get Drunk?

We have suggested that young people drink frequently. However, many want and expect to get drunk occasionally or even more often. Of course, what is "often" or "too much" or "heavy" drinking is a matter of judgment. What might be appropriate for 20-24 year olds might be outright dangerous for a child of 13 or 14 with no experience with alcohol. Some results on heavy drinking rates from surveys are shown in Table 4. Killorn (1982) found that among high school students in Prince Edward Island, 26.3% got drunk half the time they drank or more, and 23% got drunk nearly always. About 23.6% of British Columbia students and 19.4% of Ontario students were drunk in the past four weeks. Twenty per cent in the national sample had five or more drinks 15 times or more. Also about 20% of university students who drank beer had 5-8 drinks per usual occasion; 20.4% of those who drank spirits usually had 5-8 shots. About 45.9% of university students had a hangover in the past two months. It appears that about 20-25% of young drinkers, especially those aged 20-24, are getting drunk on most occasions when they drink. A much larger number are getting drunk from time to time. The 20-25% figure is consistent from one study to another and represents very large numbers. These are the youth who are most vulnerable to alcohol-involved traffic accidents, disruption of their school and family lives, and long-term dependence on alcohol.

The National Survey found considerable regional variation in drinking. There were more drinkers in British Columbia and the Prairies (87% and 86%) than in Ontario (78%), Atlantic Canada (75%) or Quebec (83%). However, the average number of drinks per occasion was highest in Atlantic Canada and the Prairies, with the lowest in Quebec, Ontario and British Columbia. Young people who do drink in Atlantic Canada and the Prairies drink more heavily.

Trends In Drinking And Heavy Drinking

It is impossible to look at trends in youthful heavy drinking and drunkenness on a national level. Comparable studies have been done only with provincial samples. We have examined the trend in drinking patterns among Ontario students since 1977. Table 5 shows the results for a variety of drinking variables. It can be seen that the overall trend is clearly downward. For the total sample — and males and females separately — there are declines in:

(i) drinking at least once in the past year

(ii) number of drinks in the past year

(iii) daily drinking

(iv) drinking of three glasses of beer or wine

(v) drinking before Grade 7

(vi) the perceived availability of alcohol.

However, there is no decline for the total proportions getting drunk in the past four weeks or for the proportions of students having five or more drinks, although the latter declined among males only. Overall, it appears that students are reducing their levels of drinking and the average number of drinks. However, students who like to get drunk — probably that 20-25% we spoke of above — are not changing their drinking behavior. Our student population is, on average, becoming increasingly more cautious about drinking. However, that group still contains about a quarter who continue to drink heavily and get drunk regularly. Unfortunately there is no decline in drinking, daily drinking or heavy drinking among street youth (Smart et al., 1992). The youthful drinking crowd might polarize into two groups, one drinking less and less and another smaller one firmly entrenched in heavy consumption. Of course, those remain the challenge for teachers, parents and professionals who wish to prevent heavy alcohol use by young people.

We have long term trend data for drinking among Toronto students (Smart et al., 1992) going back to 1968. In the late 1960s only 46.3% of students in Grades 7 to 13 drank alcohol beverages. Thus drinking was not a normative activity for students and to be a drinker, especially below the age of 18 or so, was unusual. However, between 1968 and 1974, the proportion of drinkers increased to 72.9% and that rate was maintained until about 1979, when rates began to fall.

The reasons for these declines are probably complex and involve both cultural changes and direct efforts to decrease student alcohol use. We should remember that in the mid- to late-1970s, per capita alcohol use stabilized and declined in Ontario as a whole. Students in the early 1980s were thus raised by parents who were being more cautious about drinking. Also, there was more emphasis on good nutrition, e.g., avoiding fats and high cholesterol foods, as well as on fitness and healthy lifestyles (Smart, 1987). In addition, school alcohol education programs were increasing and we will see in the chapter on education how effective these might have been. We will also see later that the decline in alcohol consumption occurred at the same time as declines in smoking and the use of other drugs. It appears then that young people in the early 1980s adopted more cautious approaches to drug use, as did society at large. A further possibility is that alcohol and drugs became too expensive. Real incomes began to stabilize or decline in the mid-1970s. Our answer to the question "Why has youthful drinking declined?" must be complex and multifactorial.

Why Do Young People Drink?

This can be answered in various ways. We can look at the correlates of drinking and make some sense of those. Drinking is almost always a social event and we can look at how society sets up drinking situations that are approved. We can see drinking as a reaction to stress or a way to deal with unpleasant emotions such as depression. In that case we would examine how personality characteristics relate to drinking. Many

people see drinking as a natural outcome of availability. There are so many places to drink, and it is so cheap, everyone is forced to drink (or so the argument goes). We can look at why young people drink and why some don't just by asking them. Probably that is the most direct and most valid method, one that has often been used in Canada.

In Table 6 we summarize various studies that asked young people why they drink and why they first started drinking. The answer categories and questions vary from one study to another so real comparisons are not possible. Two main themes are obvious. Young people first drink to see what it is like and to be sociable. A much smaller proportion drink to deal with some problem such as shyness, nervousness, tension or to forget their worries. Most young people in Ontario just drank to see what it was like and they drank at a party or special event. Many first drank because their parents offered them alcoholic drinks. Some young people feel pressured to drink but most, at least in the Ontario study, never felt any pressure to drink. Most young people seem to be drinking willingly in social situations and to relax. However, a minority (20-25%) have other reasons for drinking such as tension, shyness or inhibitions. We would expect those young people to eventually have greater problems with alcohol and to be heavier drinkers.

Research On Factors Associated With Heavy Drinking

We have found heavy drinking to be more common among young people who:

(i) get poor grades in school and do not intend to graduate (Smart, et al., 1978)

(ii) use other drugs such as tobacco, cannabis and other illicit drugs (Smart and Adlaf, 1991)

(iii) do not attend church regularly and do not see themselves as very religious (Adlaf and Smart, 1985)

(iv) are of Western and Eastern European descent rather than Oriental, East/West Indian (Adlaf et al., 1989)

(v) have high scores on anxiety and depression

(vi) have high delinquency scores (Smart et al., 1991; Hundleby, 1987)

(vii) have mothers and fathers who drank (Smart et al., 1978)

(viii) have friends who drink and get drunk (Smart et al., 1978)

(ix) engage in early sexual behavior and school misbehavior (Hundleby, 1987)

(x) feel rejected by their parents (Smart et al., 1978).

Most of these results have also been found in several studies by other people (e.g., Jessor and Jessor, 1977; Schlegel et al., 1985; Ellickson and Hays, 1991) in the U.S. and Canada. They show that heavy drinking is associated with other social and behavioral problems and heavy drinking environments.

All of these findings suggest an availability-proneness theory of heavy drinking (Smart, 1980). This theory suggests that heavy drinking and drug use results from the interaction of two factors: availability of alcohol and proneness to use it heavily. When both are high there will be heavy drinking. Availability refers to factors in the lives of young people that make alcohol easier to get. Our findings clearly show that young people who drink heavily come from families with parents who drink heavily, thus alcohol is probably around the home. Also young people in that situation see role models drinking heavily and may come to view that as a normal way of living. Their friends also drink and probably make alcohol available to them. They are more likely to have part-time jobs and to have more money to spend on drinking. Also they are prone to use alcohol to deal with personal, family and school-related problems. Youth who drink heavily have more anxiety and depression and more often feel rejected by their parents. They do not have the protective factors associated with church attendance or membership in a family with an ethnic background

associated with low levels of drinking. In addition, they have school problems and often do not expect to graduate. We would expect all of these factors to combine to create proneness to use alcohol as a problem solver.

Attitudes Towards Drinking

Not much work has been done on attitudes towards drinking in Canada. Most studies have enquired only about drinking behavior because sometimes attitudes do not relate well to behavior. People may reject certain drinking behaviors but still engage in them often.

Young people's attitudes in Canada are mostly against heavy drinking and a few attribute problems to drinking that are preposterous (see Table 7). In the 1985 study, Garceau found that 95% agreed that it was dangerous to drink and drive. A large majority agreed that alcohol affects reaction time, is harmful to the unborn, makes it hard to concentrate, is habit forming and slows you down. However, more than 80% drank and 39% drank weekly. We also believe that about 20% drank and drove in the past year (Smart et al., 1991). Surprisingly, 8% of young people said it increased the risk of polio and 6% said it increased the risk of lung cancer, although alcohol has not been shown to do either. We hesitate to think what other strange attitudes youth may hold about drinking and disease.

Siggner's results (1985) on attitudes indicate that few young people believe that moderate drinking can be good for your health although much evidence suggests that it might reduce cardio-vascular problems (Klatsky, 1987; Lange and Kinnunen, 1987). About 28.1% said that they felt obligated to drink even if they do not want to, but 36.2% said that people do not mind if you get intoxicated once in a while.

The most recent national study (Eliany et al., 1989) showed that most young people do not believe that you should drink enough to feel the effects in most situations, including parties, sports events, drinking with friends or co-workers at

lunch or after work or even having drinks at home. If Canadian young people really acted in keeping with these attitudes, their drinking patterns would be very different. We should remember that in the 1987 National Study, 67% of those aged 15 to 24 had consumed five or more drinks on one occasion in the past year and 20% had done it 15 or more times. Drinking five or more drinks would certainly allow people to feel the effects. Attitudes toward heavy alcohol consumption for Canadian youth appear to be much more conservative and careful than their actual behavior.

Where Do Young People Drink?

Typically, Canadians drink more at home and at friends' homes than they do in bars, restaurants or taverns. Off-premise consumption represents about 70% of all consumption, probably less for young people. In the 1989 National Study, people were asked about how often they drank while doing various activities. As expected, almost all people aged 15 to 24 drank when in bars or taverns (78.1%) and they had an average of almost four drinks. More than half said that they drank half the time or more at parties, social gatherings or weddings, where they averaged four drinks as well. Far fewer young people drank during a quiet evening at home, while visiting friends, going out to a meeting, having friends in or at clubs or sporting events. When drinking occurred in those situations, it involved less than two drinks on the average.

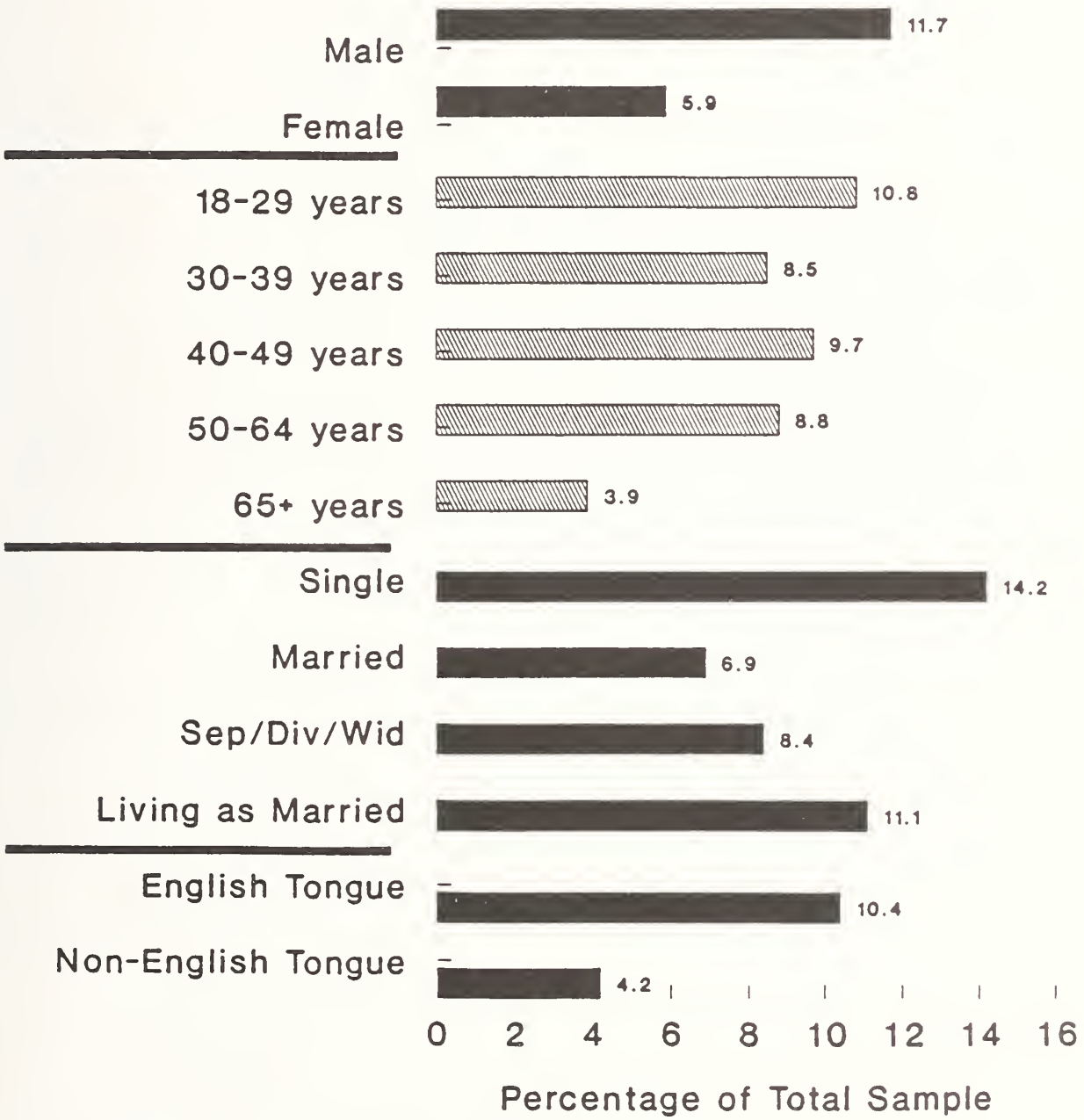
Compared to older people, young persons (aged 15-24) do far more of their total drinking in bars and taverns and at parties, where drinking is more likely to be heavy than in other situations. Also, those who drink often in bars are much more likely to have drinking problems. Bar and tavern drinking and party drinking were more than half of the drinking occasions for 15-19 year olds, most of whom cannot drink legally. These are situations where parental monitoring is low and over-drinking is likely. We should pay more attention to these situations in prevention programs.

Many adolescents drink only on special occasions such as holidays, weddings or other family events. For example, about 20% of students in the Ontario study drank most at such events. The tendency is for younger students to do most of their drinking at special family occasions; as they grow older, they do more of it away from such events and away from home. We have also found that students who drink heavily and have problems often do so in places unacceptable for drinking such as cars and parks (Smart et al., 1978).

Summary

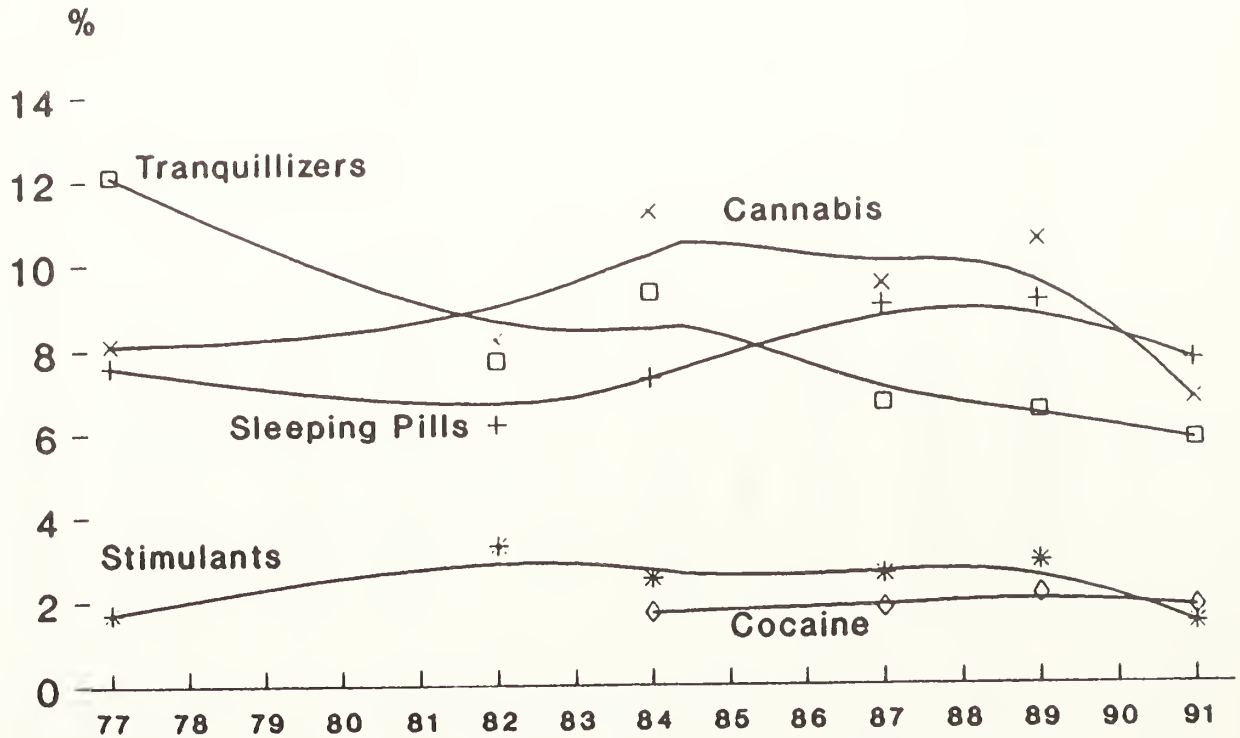
In general, drinking levels are relatively low among youth, especially in the younger ages. However, about 20-25% of youth are drinking heavily and getting drunk often. In addition we have high-risk groups such as street youth, drug abusers and drug sellers who are drinking very often. Although young people usually drink to relax and have fun, many drink in bars or at parties when underage. In addition, the conservative attitudes they express seem out of step with their actual drinking practices. Although drinking levels are declining among mainstream youth, there are risk groups and heavy drinkers whose alcohol consumption is not declining. They most need the attention of parents and concerned professionals.

Figure 2
Percentage Reporting 2+ Alcohol Problems by Subgroup, 1991



Black bars show significant factors

Figure 3
Overall Trends in Annual Drug Use



Alcohol		79.9				77.6		84.5			83.1		82.6	82.1
Sleeping Pills	+	7.6				6.2		7.3			9		9.1	7.7
Stimulants	*	1.7				3.3		2.5			2.6		2.9	1.4
Tranquillizers	□	12.1				7.7		9.3			6.7		6.5	5.8
Cannabis	×	8.1				8.2		11.2			9.5		10.5	6.8
Cocaine	◇							1.7			1.8		2.1	1.8

Table 3

Percentage of Youth Drinking Alcohol in Canadian Studies (1982-1992)

	Year	Type of Population	Percent Drinkers
General Samples - National			
Garceau	1985	National Sample (n=2212) aged 12-29	Age 12-14 - 50% 15-17 - 81% 18-19 - 89% 20-24 - 90% 25-29 - 91% past year 39% weekly
Siggner	1985	National Sample (n=2013) aged 15-24	Age 15-19 - 83.3% 20-24 - 92.0% past year 1.7% 4x per week
Eliany et al.	1989	National Sample (n=1887) aged 15-24	Age 15-16 - 63% 17-19 - 80% 20-24 - 88% past year 21.5% 2x per week
General Samples - Provincial or Local			
Hollander and Davis	1982	Students in Grades 8-12 (n=1701) in Vancouver	61.6% past year
Chamberlayne et al.	1987	Students in Grades 8-12 (n=14,712) in British Columbia	74.4% past year 20% at least weekly
Desranleau	1984	Students in Catholic secondary schools in Montreal (n=1273)	47.3% past year Grade 7 - 55.5% 8 - 78.6% 10 - 86.0%
Campbell	1986	Students in Grades 7-12 in New Brunswick	70.3% past year
Killorn	1982	Students in Grades 7-12 in Prince Edward Island	67.3% past 6 months Grade 7 - 26.5% 8 - 56.2% 9 - 61.1% 10 - 73.2% 11 - 81.8% 12 - 87.0% .69 daily

Continued...

Table 3 continued.

	Year	Type of Population	Percent Drinkers
General Samples - Provincial or Local			
Mitic and Neuman	1983	Students in Grades 8 and 10 in Halifax (n=867)	69.0% past 6 months
Smart and Adlaf	1991	Students in Grades 7, 9, 11 and 13 in Ontario (n=3945)	58.7% Grade 7 30.1% 9 55.7% 11 75.0% 13 84.1% daily 1%
Gliksman et al.	1989	Students at four Ontario Universities (n=4911)	98.6% daily 1%
Hindmarsh and Opheim	1990	Students in Grades 6-12 North West Territories	beer 70.6% wine 69.0% liquor 58.4% (past year)
B.C. Ministry of Health	1992	Students in Grades 8-12	81.1% past year 51.7% past 4 weeks 15.7% weekly or more
Mathieson et al.	1992	Community College students in Calgary	94.8% past year 1.2% daily
Special High Risk Groups			
Erickson et al.	1987	Cocaine Users (n=111) in the community Mean age 29 years	98.2% past year daily 32.4%
Radford et al.	1988	Street Youth (n=712) in 10 Canadian cities	88% past year 9% daily
Smart et al.	1990	Street Youth in Toronto (n=145)	95% past year 6% daily
Smart et al.	1992	Adolescent Drug Sellers (n=67)	100% used past year
Smart	1988	Student users of crack Student users of cocaine Non users of crack or cocaine	86.0% 89.5% 70.5%
Smart et al.	1992	Street Youth in Toronto (n=217)	95% past year 6% daily 18 drinks on average in past weeks

Table 4

Indicators of Drunkenness and Heavy Drinking Among Youthful Population

	Year	Indicator	Percent Reporting
Killorn P.E.I. Students	1982	Got drunk half the time Got drunk nearly always	26.3 23.0
Chamberlayne B.C. Students	1987	Drunk within past 4 weeks	23.6
Eliany et al. National Sample	1991	Consumed 5+ drinks at a time Consumed 5+ drinks at a time 15 times or more (past year)	67.0 20.0
Gliksman et al. National Sample	1989	Hangover in past 2 months Hangover in past year Nausea and vomiting past 2 months Nausea and vomiting past year Involved in an accident past year Loss of memory past year	45.9 76.2 18.0 41.1 2.8 14.1
Smart and Adlaf Ontario Students	1991	Drunk in past 4 weeks Drunk about weekly (4 or more) Consumed 5+ drinks at a time in past 4 weeks Consumed 5+ drinks at a time about weekly	19.4 3.7 58.2 5.5
Gliksman Ontario University Students	1989	Usually drink 5 to 8 beers per occasion Usually drink 5 to 8 glasses of wine per occasion Usually drink 5 to 8 shots of spirits per occasion (these data are for drinkers of these beverage types, not for all students)	20.0 5.2 20.4

Table 5

Percentage of Ontario Students Reporting Various Drinking Behaviors 1979-1991

Year	1979	1981	1983	1985	1987	1989	1991
Total N.	(4744)	(3270)	(4737)	(4154)	(4267)	(3915)	(3945)
Drinking At Least Once Past Year							
Total***	76.9	72.3	71.7	69.8	68.1	66.2	58.7
Males***	79.0	72.5	72.6	71.3	69.1	68.1	58.1
Females***	74.9	72.2	70.9	68.3	67.1	64.5	59.3
Mean Number of Drinks Past Year Among Drinkers [a]	(N=2379)						(N=3612)
All Drinkers (SD)***	315.6(618.1)	264.1(577.0)	285.3(577.1)	253.8(503.7)	231.7(538.7)	215.8(429.5)	236.3(506.8)
Males (SD)***	390.0(715.0)	323.4(660.7)	365.0(673.0)	323.6(598.5)	294.1(649.5)	256.2(494.2)	304.0(589.7)
Females (SD)***	234.5(478.4)	198.0(457.3)	205.6(447.6)	178.5(360.8)	170.3(391.4)	175.0(347.8)	164.9(389.1)
Drinking Almost Daily in Past Year							
Total**	0.9	0.6	0.9	0.5	0.7	0.3	0.4
Males*	1.4	0.9	0.6	0.9	1.3	0.5	0.7
Females*	0.4	0.2	0.4	0.1	0.2	0.1	0.1
More Than 3 Beers at a Sitting							
Total***	21.7	18.3	22.2	20.0	16.7	18.4	17.7
Males***	29.2	24.1	29.5	27.8	23.2	23.3	22.7
Females	13.9	11.8	15.2	12.0	10.4	14.0	12.5
More Then 3 Glasses of Wine at a Sitting							
Total***	10.6	9.8	12.0	10.6	8.4	5.0	4.1
Males***	11.7	10.3	12.2	9.9	7.8	4.0	4.5
Females***	9.4	9.2	12.0	11.4	9.0	6.0	3.9
Drank Before Grade 7							
Total***	43.0	38.8	-	-	-	27.8	23.5
Males***	47.7	44.2				31.9	23.9
Females***	38.2	32.6				24.0	22.9
Easy or Very Easy to Get Alcohol							
Total***	78.4	-	-	-	64.8	64.1	66.9
Males***	80.7				66.0	65.9	69.0
Females***	76.0				63.6	62.4	64.5
Drunk During Past 4 Weeks							
Total	18.4	15.1	16.5	15.9	18.0	16.6	19.4
Males	20.7	16.7	20.2	17.6	18.7	17.3	20.4
Females	16.1	13.4	12.8	13.9	15.3	15.9	18.3
Five or More Drinks Past 4 Weeks							
Total	27.1	21.5	23.4	21.5	21.5	23.9	21.9
Males*	32.0	25.1	28.5	25.1	25.1	26.9	24.7
Females	21.8	17.5	18.5	18.0	18.0	20.9	19.0

- Question not asked in that year
- * p<.05, 1979 vs 1991
- ** p<.01, 1979 vs 1991
- *** p<.001, 1979 vs 1991
- [a] Based on drinkers only
- [b] Based on licensed drivers only

Table 6

Reasons for Drinking Alcoholic Beverages

Study	Year	Reason	Percent Reporting
National Survey	1989	- to be sociable	69% of drinkers
		- to feel good	42% " "
		- to relax	39% " "
		- to add to enjoyment of meals	32%
		- to feel less inhibited or shy	23%
		- to forget worries	16%
National Survey	1985	- on social occasions I feel obligated to have a drink even if I would rather not	21.7%
British Columbia Students Chamberlayne	1987	- to see what it was like (first drink)	45.3% of drinkers
Health Promotion Survey	1985	- helps nervousness - makes you feel part of the group - reduces shyness - provides pleasant experiences	51% 55% 74% 53%
Ontario Students	1991	<u>Were you ever pressured to drink?</u> - never pressured to drink - pressured to drink - never offered alcohol <u>Reasons for Trying First Time</u> (choose one) - see what it is like - friends were drinking - seemed like fun - siblings were drinking - wanted to relax, relieve tension - at a special event (concert, party etc.) - wanted to get high - bored, nothing else to do - old enough to drink it safely - parents offered it - someone pressured me	 59.1% 11.2% 29.8% 23.9% 4.3% 4.4% 1.0% 1.0% 21.9% .9% 1.0% .6% 9.1% .6%

Table 7

Selected Data on Attitudes Toward Drinking

	Year	Attitude Re Alcohol	% Agreeing
Garceau National Sample	1985	- Dangerous to Drink and Drive - Affects Reaction Time - Harmful to Unborn - Harder to Concentrate - Habit Forming - Slows You Down	95 86 83 78 73 75
		- Leads to Heart Disease - Increases Risk of Polio - Increases Risk of Lung Cancer	52 8 6
Siggner National Sample (Age 15-19)	1985	- Moderate drinking can be good for your health - On social occasions I feel obligated to drink even if I would rather not - Most drinkers do not suffer health problems as a result of their drinking - Most people do not mind if you get intoxicated once in a while	26.5 28.1 17.2 36.2
Eliany et al. National Sample (Age 15-24)	1989	People should feel free to drink enough to feel the effects when/for: - at a party at someone else's home - a man out at a bar with friends - a woman out at a bar with friends - a couple having dinner at home - co-workers out to lunch - with friends at home - getting together with friends after work - getting together for sports events or recreation	 31.1 36.9 28.5 17.2 1.0 26.1 7.5 7.6

Chapter 3

What are Drinking Problems... And How Many Young People Have Them?

The Scope of Problems

What constitutes a problem, especially a drinking problem, depends very much on who is defining it. If we define a drinking problem as alcoholism or the kind of drinking problems that get people into alcohol treatment centres, then very few young people have problems. Only a few young drinkers have had or need treatment for alcohol-related problems. Also, few young people will show chronic health problems from alcohol such as cirrhosis, alcoholic psychosis or alcohol dependence. However, most parents will assert that any unsupervised drinking by their pre-teens or young teenagers is a problem. They do not condone it or accept it, and view it as a problem which must be solved. On the other hand, some young people experience more of the usual alcohol problems. Recently I saw a young man wearing a T-shirt picturing a drunk climbing out of an empty cocktail glass. It said underneath: "I have a drinking problem — I can't get enough booze." We will see in this chapter that the interpretation of drinking behaviors as problems depends on who is observing them. The drinking problems most often reported by young people involve heavy drinking on a particular occasion rather than chronic consumption over a long time. They also involve social situations and safety more than serious physical illnesses. Drinking and driving represents an especially serious problem for young people.

How many youth have problems depends, too, on the scales or problem sets used. When the longest problem lists are used, about a quarter of students are classified as having a drinking problem, but when using the more restrictive lists, the proportion is much lower — only about 12%.

We are also concerned with how the alcohol problems of other people affect youth. They are often the victims of heavy drinkers in family situations. There are also fetal effects of alcohol that cause long-term problems for young people. These include neurological problems, learning disabilities and physical problems.

Self-Reported Alcohol Problems

The number of alcohol-related problems included in Canadian surveys of youth is very large. Surveys cover social, family, health and alcohol-related problems, and tend to use specially constructed items rather than the standard alcohol problem scales such as the CAGE, MAST, etc. One reason is that those scales often contain items inapplicable to young people, such as problems with marriage, employment and finances. However, scales developed specifically for youth (Donovan et al., 1983; Williams, 1967) are not often used either. New, untried scales are frequently used and there is little standardization.

In Table 8 we show data on various alcohol problems reported in Canadian surveys. It can be seen that all studies use somewhat different sets of problems. The highest rates of problems are found in the 1985 National Survey by Garceau (1985) but it contains the broadest and most general questions. For example, 13% of young people reported "tension" with family or friends and 12% reported "difficulties" with driving. If these questions had referred to more serious problems, such as fights with family members or drinking-driving accidents, the rates would probably have been lower. Only 8% of youth reported an accident or violence due to drinking in the past year. Fewer (6%) reported health or school problems.

Chamberlayne's study (1987) in British Columbia is one of the few to ask about aggression. Some 18.5% of high school students said that they had engaged in aggressive or destructive behavior after drinking. Gliksman et al. (1989) found that 6.2% of university students reported fighting or vandalism after drinking.

Effects on physical health are experienced by a minority of drinkers — 10.7% in Eliany's national study, 6% in Garceau's national study. Only a small minority of Ontario students have been treated for an alcohol problem (1.3%), or have talked to a school counsellor or teacher about them.

The most frequently studied alcohol problems for youth appear to be general "trouble" with work or school, and about 5% to 10% of youth report such problems. However, among university students, 13% had cut a class because of drinking and 12.6% had missed one because of a hangover.

Serious problems from drinking are reported by relatively few students. For example, 6.8% of university students felt they had a drinking problem. Among high school students in Ontario, 5.7% had been arrested or warned by police because of drinking (12.2% in British Columbia), 4.8% wished they could drink less, but only .9% had talked to a school nurse or counsellor about drinking.

The two national studies found that about a quarter of youth had one or more alcohol-related problems, whereas the 1991 Ontario survey among high school students found only 12% with one or more problems. Of course, the national studies include youth up to the age of 25 and therefore more heavy drinkers. However, the most recent national study (Eliany, 1992) found no differences in alcohol-related social or family problems between those aged 15-19 and 20-24, but somewhat more health problems (12% vs. 9%) from drinking among the older group. Young people did have far more problems than middle-aged or older persons. As expected, males were much more likely than females to experience problems (28% vs. 18%).

We do not have good data on regional differences in problems from the National Survey. However, young drinkers in British Columbia and the Prairie provinces much more often reported drinking five or more drinks 15 or more times in the past year (23.4% and 25.2%). These rates were much lower in the Atlantic provinces (15.5%),

Quebec (17.9%) and Ontario (18.0%). This heavy-drinking variable is probably related to drinking problems around health, family and social issues.

It is of interest to see that the rate of alcohol problems among all youth (20-25%) is very close to the rate of heavy drinking we identified in Chapter 2. We would, of course, expect that rate to be lower in most high school populations.

Youth With Major Drinking Problems

Table 8 also contains data from our study of street youth (Smart et al., 1990). Rates of problems and heavy drinking were far higher in that group than for comparable mainstream youth. Almost half felt they should drink less. Thirty-five per cent drank in the morning, 31% felt bad or guilty about their drinking and 13% had received medical attention because of drinking. Only 35% had no drinking problem at all.

Vingilis (1981) found a similar high rate of problems among youthful drinking offenders. These were young people charged with liquor act violations in Toronto, mostly possession of alcohol under the age of 18. In this group, 10% were daily drinkers, and the median number of drinks per occasion was six. About half felt they should stop drinking and about 30% said that they had lost control of their drinking. More than one arrest for under-age drinking indicated a serious problem, whereas one arrest only did not.

Our study of drinkers in the Durham area near Toronto (Smart et al., 1981) indicated that volume of alcohol consumed was the best predictor of alcohol dependence symptoms for people aged 18-25. In that group, sex, birthplace, religious affiliation and employment status were not predictive of dependence on alcohol. However, dependence was most common among those who were not married, had no religious participation, were employed, of lower socio-economic status, lower income and who drank more frequently.

A similar study of predictors among high school students (Smart, 1979) showed that alcohol problems were mostly closely related to the frequency of drunkenness and of drinking more than five drinks on an occasion, as well as to drug use and drug problems. Students who had alcohol problems very often had drug problems in addition. Alcohol problems were not related to age, region or mother's or father's occupation, but were two to four times more likely to be related to being male than to achieving low grades in school. In general, young people with drinking problems are a multi-problem group. They drink too much and use too many drugs for their health. In addition, they have many drug problems, plus numerous school and other social problems.

Trends in Youth Drinking Problems

It is difficult to get a comprehensive picture of how youthful drinking problems have been changing in Canada. The national studies do not have consistent trend data for problems, nor do most provincial studies of students. However, we have enquired about drinking problems among students in Ontario since 1979. The scale includes items such as:

- being arrested or warned by police because of drinking
- seeing a doctor or being in hospital because of drinking
- talking to a school counsellor or nurse because of drinking
- wishing they could drink less
- having parents think they drink too much
- driving within two hours after drinking.

The trend in drinking problems is shown in Table 9. It can be seen that the most common problem for students is drinking and driving, followed by arrests or warnings by police and wishing they could drink less. The order of these problems has not changed much over the years. 1979 was the peak year for most drinking

problems. Students in high school in that year and a few before it constitute a "wet" generation of very heavy drinkers. Three problems — "parents thinking they drink too much," "wishing they could drink less," and "drinking-driving" — show significant declines, for both males and females and over the total sample. The decline in drinking-driving is especially notable. In 1991, fewer than half as many students drove after drinking as did in 1979 (53.1% vs. 20.4%). This is probably due in part to higher insurance premiums for younger drivers, temporary licence suspension programs, and the overall tendency for young people to drink much less than they did in the late 1970s.

We should also note that not all alcohol problems have declined. The more serious ones, such as being arrested or warned by police, or needing medical care or counselling for drinking, have not changed much at all. Apparently, overall drinking and the more minor drinking problems have declined, but we are still left with many problem drinkers among students. We do not have comparable trend data on problems for older youth, e.g., age 20-24, whose problems are likely to be greater and in keeping with their higher alcohol consumption.

Physical Problems from Drinking

It is well known that heavy alcohol consumption can lead to physical and psychiatric problems. The most common problems are liver disease, alcohol dependence, psychoses and cardiomyopathy. There are also acute toxic effects and poisoning from alcohol. Table 10 shows data for different age groups on these consequences. It can be seen that the death rates for those under 25 due to any physical and psychiatric consequences of alcohol consumption are very low, except where acute toxic effects are concerned. Rates of alcoholic psychoses and alcohol dependence are much lower for young people than for older people. However, young people are much more liable to suffer consequences from heavy alcohol use on a single

occasion. Hospital admissions for non-dependent abuse of alcohol are about the same for those under 20, those 20-24 and all ages combined. However, rates for hospital admissions due to the toxic effects of alcohol are much higher for young people than for all ages combined. Young people get into problems with drinking because of heavy consumption or binges rather than from the long-term consequences of chronic consumption. The task for parents and educators is to intervene in these heavy drinking activities and prevent the worst disasters from happening.

Drinking-Driving and Youth

Since young people often drink large amounts of alcohol on a single occasion, we expect them to have acute problems with drinking. We saw earlier that about 20% of students drank and drove in the past year. Many of them would be new to drinking and new to driving as well. About 75% of teenagers are licensed, but they have relatively low exposure to accidents as they drive infrequently. Many drive only short distances until they are working and have their own cars. Their low mileage means that they have little experience with driving and hence they have high accident rates. Young people also have a low tolerance for alcohol, especially large amounts. They are behaviorally impaired after a few drinks, although their blood levels may not be very high.

The National Survey indicated that young adults do more drinking and driving than middle-aged or older people. About 30% of those aged 20-24 and 25-34 drove after consuming two or more drinks in the previous hour. The rates for those aged 15-19 and 35-54 are about the same (21-23%) but much lower for older people (8-11%). It appears, then, that young adults aged 20-24 (but not teenagers) frequently expose themselves to risky drinking-driving situations, despite their inexperience with drinking and driving.

Rates of alcohol-related accidents, not unexpectedly, are highest for young people. The highest rates (5.4 per 1,000 drivers) are for 19-year-olds, followed by those 20-24 (4.9). In contrast, rates of alcohol-related accidents are 1.3 per 1,000 drivers for those aged 45-54 and 1.0 for those aged 55-64.

Drinking and driving is largely but not exclusively a young man's activity. In the National Survey, young males (15-24) were twice as likely as females to report drinking and driving. Also, on the road, impairment rates among drivers are three times as high for males as for females (Single, 1992). In 1986 a study of night-time drivers was made all across Ontario. People aged 16-24 represented a third of all drivers and a third of those who were impaired. However, those aged 25-29 and 50 and over included more impaired drivers than expected (Single and McKenzie, 1992).

Among fatally injured drivers tested for alcohol in 1989 (Table 12) about a third were aged 24 or under. We can see that young people are having their fatal accidents at lower blood levels than are older people. Most fatally injured people aged 16-19 were sober at the time of the accident and few had high blood alcohol levels (16.3% had over .15, or 150 mg/100 mL). However, more had .5 to .15, or 50-150 mg/100 mL, than in the older groups. This probably indicates both their inexperience with driving and their low behavioral tolerance for alcohol. Most fatally injured drivers aged 20-35 are not sober at the time of the accident and they have much higher blood alcohol levels.

Alcohol and Other Accidents

We usually think of highway traffic accidents in relation to drinking, but there are many other accidents as well. About 42% of boating fatalities involve a victim who was drinking and about half of them are young people (Mogford, 1983). In addition, off-road vehicles account for about 10 deaths and several hundred injuries per year

just in Ontario. About 60% of victims are under 25 and about 20% have been drinking at the time of the accident (Ministry of Transportation, 1989). Fortunately, injuries from off-road vehicles are decreasing as such vehicles seem to be going out of style.

Snowmobile accidents seem to be increasing, at least in Ontario. There were 29 deaths and 311 injuries in Ontario in 1989 (Ministry of Transportation, 1989). About 21% were drinking at the time of the accident and about half of those injured are under 25. Only for bicycle accidents is alcohol an insignificant factor, as only about 3% of the victims have been drinking.

Youth as Victims of Other People's Drinking

We often think of drinking problems among youth as self-inflicted only. However, everyone who abuses alcohol creates some inconvenience or problem for those around him. Young people are often the unwilling victims of drinking by parents or other people. Not much attention has been paid to victimization due to drinking, but some data were gathered in the latest National Survey. Table 11 shows some of the results. People were asked whether they had experienced various problems due to other people's drinking in the past year. The list of problems included being insulted or humiliated, arguments or quarrels, family problems, drinking-driving, vandalism, assault, loud parties and financial problems. All of these problems victimize young people (15-24) far more often than older people. Most of the differences are very large and it is clear that young people bear many unpleasant consequences from other people's drinking. Probably most victimization comes from drinking by parents, but that is not clear from the data presented.

Child Abuse Due to Drinking

Victimization due to parents' drinking is common in the lives of many youth. Our best data come from studies of street youth. In our study in Toronto (Smart et al., 1992), we found that only 21% of street youth left home because of their own drinking, whereas 36% left home because of alcohol problems in their family. These problems were chiefly violence and sexual abuse by family members and a poor family environment due to drinking. Among street youth reporting alcohol problems in their families, such problems were most common among fathers (67% of street youth reported it) and mothers (44%) but also occurred among uncles (67%) and sisters or brothers (41%). Significantly more street youth reported family alcohol problems in 1992 than in 1990. Solving the street youth problem is complicated, but any solution will have to reduce victimization of young people due to family drinking.

Childhood abuse due to alcohol problems has also been found in more usual non-street populations. Ney et al. (1992) made a study in Vancouver of 167 adolescents chosen from psychiatric treatment centres (n=128), a young offender's centre (n=23) and a high school (n=26). They found that the worst experiences reported by adolescents were abuse by parents, family breakup, criminal charges and death of a parent. Most children were mistreated with physical abuse, verbal abuse, emotional or intellectual neglect or sexual abuse. Most received more than one type of mistreatment. Some 69% of children blamed alcohol abuse for their physical and sexual abuse and only 23% expected that they would be good parents themselves. We therefore see that parental alcohol abuse can affect several generations, not just the children of alcoholics.

Passengers in Accidents as Victims

We probably think most about drivers or pedestrians when we consider the victims in accidents. In Canada in 1989, 774 drivers were killed driving while intoxicated, and they in turn killed about 3,500 other people. However, young people are often passengers in cars where the driver is drinking and many do not die from their injuries. An interesting study of hospital trauma victims is being made at Sunnybrook Hospital in Toronto (Vingilis, 1993). Preliminary results indicate that most trauma victims in drinking accidents are aged 18-25, and a majority of passengers are female. Males tend to be the drinking drivers and females the passengers, who often fare worse than the drivers. One year after the accident, 40-50% of injured passengers are still having headaches, problems with concentration, vision and hearing. They are also more likely than drivers to have financial, family and psychological problems such as anxiety and depression. Unfortunately, passengers also take longer than drivers to return to work after the accident (4.8 vs. 3.5 months).

Fetal Alcohol Effects

About 20 years ago it was recognized that alcohol consumption could lead to serious long-term effects on offspring born to heavy drinkers (Lemoine et al., 1968; Jones and Smith, 1973). A fetal alcohol syndrome (FAS) has been described which includes: (i) prenatal and/or postnatal growth retardation; (ii) central nervous system abnormalities, such as skull or brain malformations associated with developmental delays, intellectual impairment and behavioral problems; and (iii) a characteristic face with short eye openings, a thin upper lip and an elongated, flattened mid-face. Those with FAS experience problems with learning, speaking, attention, memory and problem solving, and are unco-ordinated and impulsive. Some developmental experts also refer to fetal alcohol effects or FAE to characterize a less well developed cluster

of alcohol-related birth defects. Maternal drinking represents another type of victimization and one with very serious consequences.

Clearly, the most serious FAS cases occur when mothers are alcoholic and have been drinking large amounts on a daily basis (six or more drinks). However, some neurobehavioral defects and growth retardation occur where mothers have reportedly been drinking moderate amounts, so a "safe" level of drinking cannot be specified (Gordis, 1991).

Many studies have been made of FAS and FAE in the United States, but we have few in Canada. Abel and Sokol (1987) reviewed 19 published studies from a variety of countries and concluded that the FAS rate was 2.9 per 1,000 live births. Rates for native American and black mothers of low socio-economic status were 2.6 per 1,000 births but only .6 per 1,000 for predominantly white middle-class mothers.

Good estimates of fetal damage caused by alcohol in Canada are difficult to obtain. Statistics Canada reports in 1988 show only 20 cases of "noxious influences transmitted via placenta or breast milk" involving alcohol. There are 11 cases of "suspected harm to the fetus from maternal alcohol addiction, listeriosis or toxoplasmosis," but it is not clear how many of these are due to alcohol alone. FAS cases are certainly under-reported by Statistics Canada, probably because hospitals and physicians take little interest. As an indication of this neglect we can examine the study by Robinson et al. (1987) in an isolated native community in British Columbia. They found that 22 of 116 births produced children with FAS, more than Statistics Canada showed for the whole country. From other information they estimated that FAS occurred in 1 per 2,717 live births for the general population and 1 in 150 for native populations. We do not have any good indications of trends in FAS cases in Canada, but that information is much needed.

Special attention to birth defects has been paid by the YWCA in downtown Vancouver. One of their reports (McPhee, 1992) states that 15 of 30 babies born in

downtown east side Vancouver in 1990 showed symptoms of FAS. Most of the clients of the Crabtree Center at the Vancouver YWCA are poor single mothers who are often homeless. Many mothers bear the signs of FAE and have economical and educational problems as well as a high level of alcohol and drug use. The Crabtree Centre has developed an FAS/FAE prevention program that attempts to get pregnant mothers to reduce their drinking. The Centre advocates warning labels on alcoholic beverages to caution mothers against drinking and notes that since 1991, Yukon liquor outlets have put bright yellow labels on bottles carrying the message "Warning: drinking alcohol during pregnancy can cause birth defects." No evaluation of the effectiveness of these programs is available, but they can certainly do no harm.

The Canadian Centre on Substance Abuse (Single, 1992) has recently released a summary of information on FAS. They recognize that FAS is under-reported and inadequately studied in Canada. As a consequence they recommend that: (i) warning labels about pregnancy risks be put on alcoholic beverages; (ii) there should be concerted efforts to increase public knowledge about FAS and FAE; (iii) funding for research should increase, and (iv) professional education about FAS and FAE should be made more available to health care professionals.

Genetic Aspects of Alcohol Problems

It has been known for some time that "alcoholism runs in families." The temperance approach of the last century attributed all alcohol problems to a genetic predisposition. Of course, we now take a more scientific approach. Since 1960, hundreds of studies have been made of the genetic aspects of alcoholism and they are too numerous to summarize here (see Cloninger, 1992 for a review). Most of these studies involve family history approaches, studies of twins raised together and apart and biochemical studies of genetic markers. The majority have been conducted in the U.S. and in Scandinavian countries while the area has been largely neglected in

Canada. At present, we do not have a good estimate of what proportion of alcoholics in Canada have a genetic predisposition, as twin studies and genetic marker studies have not been done. However, it is unlikely that our experience would differ much from that in the U.S. Most estimates suggest that about 22-50% of alcoholics have an alcoholic parent, although some estimates are as high as 80%. About 22-40% of alcoholism seems to be inherited, but this area is still controversial.

Other consequences from living with alcoholic parents include psychological problems such as anxiety and depression. A recent study in Calgary (Ed Guebaly et al., 1992) showed that 40% of patients in an outpatient anxiety treatment program were adult children of alcoholics. This was similar to the proportions found in a substance abuse program. The adult children of alcoholics in both programs were younger and more likely to be female than those who had no alcoholic parent. It appears that anxiety disorders and alcohol problems are both equally likely as a consequence of parental drinking problems.

Summary

Alcohol problems are many and varied for young people, especially males. They more often involve social and family problems than serious physical problems or hospitalization. However, a major problem is drinking-driving, which involves more young adult males (20-24 and 25-29) than expected. About 20-25% of young people have serious problems, but the number with problems depends on our definition. Young people are often victimized by the drinking of others, whether it be parents, other family members or drinking drivers. Victimization of youth through parental drinking is a large problem not sufficiently studied. It is clear, however, that heavy parent drinking leads to physical and sexual abuse, risks for drinking problems in children and anxiety disorders. Risks of FAS and FAE are considerable but are

under-reported in Canada. We need more information on all aspects of victimization from parental and other people's drinking.

Table 8

Frequency of Drinking Problems for Canadian Youth - Percentage Reporting

	Year	No Problem	Problems Due to Alcohol	
Garceau (National Sample)	1985	74%	Tension with Family/Friends	13
			Tension with Work or School	6
			Problem with Health	6
			Difficulties with Driving	12
			Trouble with the Law	7
			Injuries Due to Accident/Violence	8
			(all in past year)	
Chamberlayne British Columbia Students	1987	-	Aggressive or Destructive Behavior	18.5
			Warned by Police Because of Drinking	12.2
			(both lifetime)	
Eliany et al. National Sample 15 to 24	1989	76.7%	With Friends or Social Life	8.8
			Physical Health	10.7
			Outlook on Life	5.6
			Home Life or Marriage	4.5
			Work, Studies, Employment	4.8
			Financial Position	8.6
			(all lifetime)	
Smart and Adlaf (1991) Ontario Students	1991	12%	Arrested or Warned by Police	5.7
			Seen a Doctor or in Hospital	1.3
			Talked to School Counsellor or Nurse	.9
			Wish They Could Drink Less	4.8
			Parents Think They Drink Too Much	2.3
			(past year)	
Gliksman et al. Ontario University Students	1989	-	Cut a Class After Drinking	13.0
			Missed Class Because of Hangover	12.6
			Lower Grades Because of Drinking	5.5
			Trouble with Administration	2.6
			Criticized by Date	6.3
			Believed They Had a Drinking Problem	6.8
			Did Something They Regretted	20.1
			Trouble With the Law	1.8
			Fighting	6.2
			Vandalism	6.2

Table 9

Percentage of Ontario Students Reporting Various Drinking Problems, 1979-1991

Year	1979	1981	1983	1985	1987	1989	1991
Arrested/Warned Because of Drinking							
Total	6.2	5.1	6.0	5.5	5.4	5.8	5.7
Males	8.0	6.5	8.1	8.2	7.7	7.3	7.5
Females	4.5	3.4	4.1	2.6	3.3	4.4	3.6
Doctor/Hospital Because of Drinking							
Total	1.1	0.8	1.0	1.1	1.1	0.9	1.3
Males	1.4	1.0	1.2	1.2	1.4	0.7	1.7
Females	0.8	0.6	0.8	0.8	0.8	1.2	0.8
School Counsellor, Nurse or Teacher							
Total	1.3	0.8	0.7	0.7	1.2	0.7	0.9
Males*	1.5	0.9	0.9	0.8	1.3	0.8	0.8
Females	1.0	0.7	0.6	0.5	1.0	0.7	0.9
Wish Could Drink Less							
Total*	6.0	5.6	6.1	5.2	6.0	4.8	4.8
Males*	7.3	6.9	7.6	5.9	7.3	5.1	5.5
Females	4.8	4.2	4.6	4.4	4.8	4.5	4.1
Parents Think Drink Too Much							
Total**	3.9	3.0	2.9	2.7	2.7	2.4	2.3
Males**	5.1	4.0	4.4	3.7	3.9	3.2	3.0
Females**	2.7	1.8	1.5	1.6	1.4	1.5	1.5
Drank and Drove [a]	(N=941)						(N=1652)
Total**	53.1	38.5	30.5	36.4	25.4	24.6	20.4
Males**	59.9	44.3	48.7	40.8	29.8	28.5	24.8
Females**	42.7	30.3	35.5	29.4	20.0	19.9	14.8

* $p<.05$, 1979 vs 1991
** $p<.001$, 1979 vs 1991
[a] Based on licensed drivers only

Table 10

Deaths and Hospital Separations (in brackets) for Alcohol-Related Diseases Rate per 100,000 in Canada (1987-88)

	Age Under 20		Age 20 - 24		All Ages	
Alcoholic Psychoses	0	(.7)[1]	0	(5.0)	.2	(20.6)
Alcohol Dependence Syndrome	0	(.5)	.1	(30.8)	1.7	(63.7)
Non-Dependent Abuse of Alcohol	0	(13.4)	.2	(13.0)	.4	(12.1)
Alcoholic Cardiomyopathy	0	(0)	0	(0)	.3	(1.0)
Alcoholic Gastritis	0	(.1)	0	(.2)	.1	(8.5)
Alcohol-Related Chronic Liver Disease	0	(0)	0	(0)	3.8	(21.0)
Chronic Liver Disease - No Alcohol Mention	0	(1.0)	0	(1.1)	4.2	(5.5)
Toxic Effects of Alcohol	.1	(5.6)	.2	(8.2)	.4	(3.8)
Accidental Poisoning by Alcohol	0[2]		.2		.3	
Total Alcohol-Related Problems	**.1**	**(38.1)**	**.5**	**(61.3)**	**11.7**	**(143.9)**

1. Value shown as 0 may be values under .1 per 100,000 but are usually close to 0
2. Hospital separation data not available

Table 11

Percentage of Youth and Middle-Aged People Reporting Problems Caused by Other People's Drinking in Past Year[1]

	Age 15-24	Age 45-54
Insulted or Humiliated	37.8	16.6
Arguments or Quarrels	32.4	10.8
Broke Off With a Friend	11.3	5.9
Had Family Problems	11.6	5.5
Passenger With Drunk Driver	23.1	5.9
Been in Car Accident	7.9	-
Property Vandalized	7.9	2.0
Pushed, Hit or Assaulted	17.5	3.8
Disturbed by Loud Parties	35.3	22.4
Had Financial Problems	2.4	1.4

1. From Eliany et al. (1989) National Survey

Table 12

Blood Alcohol Concentration Among Fatally Injured Drivers in Canada, 1989

		Percentage of Drivers Tested with BAC (mg%)			
Age	Number of Drivers Tested	Zero	1 - 49	50 - 150	>150
16 - 19	227	55	5.0	20.3	16.3
20 - 25	383	43.1	6.3	20.3	30.3
26 - 35	518	45.2	5.0	14.8	37.3
36 - 45	286	51.4	4.5	7.6	36.4
46 - 55	157	66.9	4.5	5.7	22.9
>55	310	68.4	4.5	8.4	12.6

Chapter 4

Illicit and Psychoactive Drug Use Among Youth

Introduction

In the 1990s we have become accustomed to the idea that young people often use illicit drugs. Such is the popularity of cannabis, cocaine, LSD and other recreational drugs that we scarcely notice new reports on their use. These drugs now seem to be around most high schools and many primary schools. Drugs are very available now to students, at least in Grades 7 to 13.

In the ARF's 1991 Ontario student survey, about 29% of students said that cannabis was easy or very easy to get. Only 32.3% said cannabis would be impossible to get, and about 35% said that they had friends who were using cannabis. These data suggest that illicit drugs are readily available, especially if students are willing to make a little effort. Younger students would probably find drugs harder to get.

We need not go back far in time to see that illicit drugs were not always available to young people. Most of the current drug use phase began in the 1960s and 1970s. Cannabis appeared in Toronto schools only in the mid-1960s. Our survey in 1968 showed that only 6.7% of students used cannabis, but this had increased to 18.3% by 1970. Cocaine was also largely unknown to students until the 1970s. For example, there were only six convictions for cocaine possession from 1965 to 1969 for all age groups in all of Canada. LSD and illegal stimulants did not appear until the mid-1960s; only 2.6% of Toronto students used LSD in 1968. What we are witnessing now is a 20-year phase or window of illicit drug use which contrasts sharply with most of our past history.

Current Levels of Drug Use

Many studies have been made of drug use among Canadian students and some data from them are shown in Table 13. It can be seen that levels of drug use vary greatly from one study to another. Of course, this should be expected, as they were done at different times, in different regions and with different methodologies. We must therefore be careful in making any strongly worded comparisons among them. It can be seen that in all studies cannabis is the most commonly used illicit drug (rates from 11.7% to 30.8%) followed by LSD (2.6% to 14.2%) and stimulants (3.4% to 6.8%). Use of other drugs such as solvents, cocaine, crack cocaine and heroin are all very low in comparison to these (usually under 5%). Students in British Columbia have the highest rates of use for almost all drugs. However, cocaine use involved 4.5% of university students in Ontario and 6.1% of students in British Columbia.

Information on illicit drug use was gathered in the 1989 National Survey, but only data on cannabis, cocaine or crack, and a combined category of LSD, speed or heroin were reported. Generally, in studies of adult populations we expect to turn up few illicit drug users and hence not many questions on illicit drugs are included. About 34% of youth (15-24) had used cannabis but only 15.5% used it in the past year. The rates for cocaine were 4.9% for lifetime use, and 2.5% for use in the past year. It is difficult to know what to make of the combined category of LSD, speed and heroin, but 4.6% and 1.6% respectively reported lifetime use and use in the past year.

In the national study, use of cannabis was more common among:

- those aged 20-24 (18.4% past year) than those aged 17-19 or 15-16 (13.2% and 10.8%)
- males rather than females (19.1% vs. 11.7%)
- people in British Columbia (27.6% vs. 12.8-16.9%) than those in other provinces.

These same conclusions appear to hold true for the other illicit drugs, but the sample sizes for age, sex and geographic groupings were small. Hence it is difficult to be as certain about these differences as it is for cannabis.

Frequency of Drug Use

For most illicit drugs except cannabis, LSD and heroin, the frequency of use by users is low. In our student study, for example, 50-68% of users of solvents, glue, barbiturates, stimulants, tranquillizers, PCP, other hallucinogens, speed and cocaine had used them only once or twice in the past year. Apparently, most students who try them are just experimenting with these drugs and do not usually develop habits. Those using them 40 or more times are greatly in the minority (1.8 to 8.2%). However, only 37.1% of cannabis users, 13.5% of heroin users and 44.9% of LSD users take them once or twice a year. Those who use them heavily represent 14.3%, 19.0% and 6.7% for cannabis, heroin and LSD respectively. These drugs, therefore, represent a much stronger risk of dependence and other problems for youth than do the other illicit drugs.

Some information on how often illicit drugs are used is also available from the 1989 National Survey. Almost half (46.2%) of those aged 15-24 used cannabis less often than once a month and 22.7% used it once a week or more. Frequent use seemed more common for males and for users living in British Columbia but there was a high sampling variability for these comparisons. Estimates of the frequency of use of the other illicit drugs were not provided.

Smoking

Smoking tobacco has lost its cachet among youth in Canada, but many young people still smoke. Nationally, about 30% of those aged 15-24 were smokers in 1989 (Eliany and Courtemanche, 1992). About 22.6% of those aged 15-19 and 37% of those aged

20-24 were current smokers. Most younger people had never smoked but about half of those aged 20-24 were current smokers. Smoking rates are highest in Prince Edward Island, Newfoundland and Quebec and lowest in British Columbia and Ontario. It is difficult to see why smoking rates should be so low in British Columbia when alcohol consumption and illicit drug use are so high. Men smoke far more than women in Quebec and the Maritimes but there is little difference elsewhere. In Canada, tobacco use is greatest among those with lower incomes and lower educational levels and those living in Atlantic Canada. Smoking is fast becoming something done by the poorest people living in the poorest provinces. Current smokers are more likely to drink alcohol than non-smokers, and those who drink five or more drinks on an occasion are far more likely to be smokers (9% vs. 17%).

Trends in smoking in Canada have generally been downward and the declines have been largest in the 15-19 age group. Between 1965 and 1989, overall smoking rates in Canada declined from 50% to 30%. Surprisingly, regular cigarette smokers have not reduced the numbers of cigarettes they smoke.

Declines in smoking have also been seen in high school populations. In Ontario in 1977, 30.4% of students smoked, but only 21.7% in 1991. Similarly, in British Columbia smoking rates for students declined from 28.5% in 1987 to 27.7% in 1990. Declines occurred at all grade levels, but were greatest for females. Among Ontario students, males and females now have the same smoking rates.

Most smokers have tried to quit, and students are no exception. About 60% in the Ontario study had tried to quit at least once in the past year, most of them once or twice, but 30% had tried to quit three or more times. Most found quitting difficult and only a third quit for more than a month.

Some attention has also been paid to the use of smokeless tobacco. Several forms are available in Canada — chewing tobacco comes as loose leaves formed into twists or pressed into plugs, and snuff is available in powder form or in small pouches like

tea bags. These forms of tobacco are highly addictive, and nicotine levels are much higher in smokeless tobacco users than in cigarette smokers. Smokeless tobacco is not usually used much by youth. For example, in our Ontario student study, only 1.6% had used it in the past four weeks. Rates of use were much higher for males and those living in the North. However, in a study of adolescent natives in Northern Saskatchewan (Grades 4 to 12), 30% were current users and 50% had started before age 12 (Hoover et al., 1990). Another study in the Northwest Territories found that 17% of students were current users (Millar and Van Rensberg, 1984). It appears that special problems with smokeless tobacco are occurring in Northern and native communities, perhaps because cigarettes are expensive compared to the stronger smokeless forms of tobacco.

Multiple Drug Use

Most research shows that users of any drug are more likely to be users of other drugs. However, most young people do not use any drugs currently, except for alcohol and tobacco. Our Ontario school study recently showed that only 17.4% of students used no drug in 1979 but that had doubled to 36.4% in 1991. The largest categories in 1991 were alcohol only (32.3%), some illicit combination [usually cannabis and some other drug] (11.3%), alcohol and tobacco (8.8%) and alcohol, tobacco and cannabis (3.2%). Other combinations were much less frequent. It is of interest to note that after no drugs, the largest category involves alcohol and tobacco either alone or together (40% of students). Cannabis is very rarely used alone, as are medical drugs. Almost all cannabis users use some other illicit drug. These findings were similar to those in the 1989 National Survey, except that for those aged 15-25 patterns involving cannabis were more common.

Injection Drug Use

Because of the recent AIDS outbreak or epidemic in some countries, much concern has been voiced about injection drug use. In Canada most AIDS cases are due to homosexual or bisexual contacts and only 7.5% of cases involve drug injection as a risk factor. Most surveys of general populations do not include injection drug use because it is so rare. For example, one national study of adults (Ornstein, 1989) found that only 1.3% had injected drugs and shared needles. Our 1991 Ontario school study found that 7.1% of students had injected drugs, but almost all were medical drugs. Only 1.0% of students had injected an illicit drug, usually speed, LSD, cocaine or steroids. Injection use was more common among males. About .3% of students had shared needles in the year prior to the 1991 survey. Although these rates seem low, when we extrapolate to the entire student population, about 2,700 students were at risk for HIV and other drug-related infections such as hepatitis. Injection drug use showed a decline between 1989 and 1991, probably due to improved programs of education about safe drug use.

Injection drug use is, of course, much higher in heavy-using populations. For example the national study of street youth (Radford et al., 1989) found that 12% had injected drugs and nearly half of them had shared needles. Our street youth study in Toronto (Smart et al., 1990) found that 41% had injected drugs and 27% had shared needles. However, by the time of the 1992 follow-up study (Smart et al., 1992) the rates of both intravenous drug use and needle sharing had gone down substantially. These declines were probably due to increased education about safe drug use practices and the opening of several needle exchanges.

Psychoactive Drug Use

Psychoactive drugs include those drugs frequently prescribed for psychological problems such as pain, depression, anxiety, sleeplessness, etc. Although some can be

used to get high or for "kicks," they are not much used by young people. For example, the 1989 National Survey had trouble estimating the true levels of use; it found that of those aged 15-24 only 1.0% had used sleeping pills, .9% tranquillizers, 1.3% diet pills or stimulants and 5.6% codeine, demerol or morphine. Other national surveys have given similar low estimates of their use.

Our student survey differentiates between medical, i.e., prescription, and non-medical use of psychoactive drugs. For tranquillizers and barbiturates (sleeping pills), non-medical use is lower than medical use (1.6% and 2.2% vs. 2.9% and 4.4%), but for stimulants non-medical use is higher (4.0% vs. 2.6%). However, all of these drugs are used infrequently by young people. Compared to drugs such as alcohol, tobacco and cannabis, they represent a relatively minor problem for young people. There are some heavy psychoactive drug users but they tend also to be heavy users of other drugs such as alcohol.

Trends in Drug Use and Multiple Use

Remarkable downward trends in drug use by youth have occurred in Canada. Detailed national trend data are not available for drugs other than tobacco and cannabis, but provincial studies show the trend. Cannabis use did drop from 21% to 15.5% among young people according to the two national surveys in 1985 and 1989. The same surveys show a drop in smoking rates as well (37% to 30.3%).

The most detailed data for long-term trends in drug use come from the studies in Ontario. Data for trends covering the years 1977 to 1991 are shown in Table 14. The peak for use of most drugs was 1977 or 1979, and since that time the use of virtually all illicit and licit drugs has declined. Some of the declines are very striking; for example, cannabis use fell from 31.7% of Ontario students in 1979 to only 11.7% in 1991. Use of cocaine during the same period went from 5.1% to 1.6%. When these

data are combined with those mentioned earlier on multiple drug use, it is obvious that young people are using far fewer drugs than in the past.

The reasons for these declines in the use of illicit drugs, tobacco and alcohol are complicated and may vary from drug to drug. Similar declines have been found in studies done in the U.S. (Johnston et al., 1988) and in British Columbia, so they are not peculiar to Ontario. More students in Ontario report that cannabis is less available and more believe that cannabis is harmful and could be addictive. Another factor is probably improved alcohol and drug education both in schools and in the mass media. We will return to that topic in the section on drug education. With regard to tobacco, we know that prices have increased drastically and this may affect young people more, since they have low disposable incomes.

Although the prevalence of drug use has declined, the percentage of users who use heavily has not. If we define heavy use as 20+ cigarettes a day, or 5+ drinks at a sitting weekly, or cannabis used daily, then heavy use has not declined. What has probably happened is that higher recreational use has decreased, while heavy, addictive drug use has not. Drug use is no longer smart or fashionable in many student groups. However, we still have the same proportions of heavy drug users taking drugs not for recreation, but to solve some major social or personal problem. They represent the challenge for the next round of prevention efforts.

Trends in drug use among street youth are similar to those for students. Between 1990 and 1992 we found declines in the use of almost all drugs (Table 15). These declines still left street youth with very high levels of use.

Despite the overall decline in alcohol use, daily drinking was unchanged, alcohol problems increased and the number of street youth with problems did not change. As with youth in general, some decreases in drug use occurred among street youth, but the heavy using group with problems is larger for alcohol and about the same for drugs.

Drug Use Among High-Risk Groups

So far we have left the impression that drug use is at a relatively low and diminishing level among young people. This general statement is true for mainstream youth or youth in general. However, there are many high-risk groups who are using drugs at dangerous levels. Table 15 summarizes some of the results from these studies. Several studies of street youth have found that almost all have used cannabis at some time and more than 80% used it in the past year. Their use rates for other drugs such as cocaine, crack and LSD are five to 15 times as high as for mainstream youth. These same levels have been found for young people seen at alcohol and drug assessment centres. Abusers of cocaine, cannabis and alcohol are also likely to be frequent users of all other drugs.

Several studies of high-risk groups among students have also been done. Almost all cocaine users in the Ontario study used cannabis, 62.8% used stimulants and 27% LSD. Among students who had sold drugs (Smart et al., 1991), 97% used cannabis, 41.8% cocaine, 61.2% LSD and 55.2% stimulants. Since 4% of students sold drugs, this is a very large number to be using drugs heavily.

Was There a Youthful Drug Epidemic in Canada?

In the late 1980s, many American cities were reporting an epidemic of illicit drug use, chiefly crack cocaine use by young people. Any time there is a U.S. epidemic, Canadians expect to see a smaller, delayed version and they are not usually wrong. However, it is very doubtful that we had anything that might be called a drug epidemic. As we have seen, drug use was declining among students in the 1980s and had been for some time. Crack use came to Canada in 1986 but it only involved about 1% of adults and 1.4% of students. Also, crack use was not increasing. Street youth were daily crack users in 1990 but that number decreased to 4% in 1992. With an "epidemic" we expect to see a large number of cases occurring in a short space of

time. Real epidemics of typhoid involve about 10-20% of the population and the Black Death of the 14th century involved almost half of the population. Certainly the so-called drug epidemic in Canada did not rival those real epidemics.

Cheung and Erickson (1992) have pointed out that the "crack epidemic" occurred mainly in police reports and the mass media. For example, Toronto papers in 1989 referred to the crack problem as "the greatest threat to society in general, of any single development over the past 15 years" and said that crack use had reached "crisis proportions" and there was a "deadly plague of drugs" in Canadian cities. The RCMP said that crack was responsible for the threefold increase in cocaine-related deaths in 1986-88 (quoted in Cheung and Erickson, 1992). Seizures of drugs by police in Canada more than doubled in the late 1980s, and there was probably some increase in cocaine and crack use among some groups in large cities. However, the increase seems to have affected mainly unemployed young males, and relatively few of them (Adlaf et al., 1991).

Our findings of declining drug use surprised many people. They sometimes doubted our data and those of others that showed declines in drug use. Most were aware of a public concern about epidemic drug use and the "war on drugs" reported in the media. We had no difficulty in reconciling our finding of declining student drug use with this so-called epidemic. The downward trend in student drug use conflicted with mass media reports, but student use is not the focus of attention in most media drug stories. Although there may be an association between an increasing level of drug use in a population and an increasing number of drug offences, drug seizures and patients seeking treatment, this relationship need not hold. Moreover, many of these other drug-related indicators were not devised to measure drug use, nor can they. Consequently, it is not contradictory to find both declining drug use among such a youthful population and at the same time increases in other drug-related measures (Smart and Adlaf, 1989).

Without doubt, there were data showing increasing problems due to drugs such as cocaine. The Addiction Research Foundation had a fourfold increase in admissions of cocaine users to treatment over the years 1985 to 1990 (Smart and Adlaf, 1990), although the proportion of cocaine users has recently decreased. The average age of these cocaine patients was 23, and only about 2% were students. Most were males, often unemployed and in the unskilled or semi-skilled occupations. In sum, those arrested for drug offences are typically outside the school-age group. The apparent increase in cocaine and crack use seems to affect mainly those outside the school system.

Of course the peak for cannabis and cocaine use among students was in 1979 and 1981. Those who were in school at that time and are now aged about 25 to 30 may be maintaining a drug-use lifestyle into adulthood and contributing to some of the apparent increase in cocaine use. Thus the conflict between declining illicit drug use among students and the current wave of use and problems among young adults is more apparent than real.

Regarding the validity of data collected by self-report, we believe that such data are the most valid means available (other than biochemical testing) of establishing the extent of and trends in drug use among this population. First, overreporting of drug use appears to be negligible. Results from our surveys show that the rate of reporting a fictitious drug is 0.6%. Clearly, underreporting is the greatest source of survey error, but as long as the amount of underreporting remains constant, estimates of trends should remain valid.

Some have suggested that declining drug use data may be the result of more students not reporting deviant or socially undesirable behaviors. The rationale here is that during the past decade social norms against drug use have hardened and in turn have caused students not to report their drug use. Since 1983 we have surveyed students about involvement in a number of other delinquent behaviors such as thefts,

gang fights, etc. These data show not only no declines, which should be expected if the underreporting of socially undesirable behaviors has increased, but increases in self-reported delinquency (Adlaf and Smart, 1991).

In general, we can say that there was no "drug epidemic" in Canada in the late 1980s if we consider all indicators of use. There were increased admissions of cocaine users to treatment and increased deaths due to cocaine. When crack came to Canada, some youth did take it up, but scarcely enough to generate a "cocaine epidemic."

Some good probably came from the so-called epidemic. The Ontario government increased spending on youth drug abuse treatment and established an Ontario Drug Strategy in the late 1980s. Also, the federal government established the National Drug Strategy in 1987. Much of the rhetoric behind these efforts referred to "the epidemic." The strategy resulted in more funds being available for research treatment and prevention efforts. By the time the national program ends it will have put an additional $500 million into the field and a number of new agencies will be operating. The largest of these is the Canadian Centre for Substance Abuse, which carries out research, policy analysis and community development in order to solve Canada's drug problems.

Factors Associated with Illicit Drug Use

We have already suggested many social and demographic factors associated with drug use. The previous chapter listed those associated with heavy alcohol use and many apply also to drugs. In summary, illicit drug use in Canada is more common among young people who:

(i) are males, especially males in British Columbia (Eliany et al., 1992)

(ii) get poor grades in school, do not intend to graduate, and drop out early (Smart et al., 1991)

(iii) do not attend church regularly and do not see themselves as very religious (Adlaf and Smart, 1985)

(iv) have high involvement in delinquency such as theft, gang fights (Smart et al., 1992)

(v) have friends who use drugs (Smart et al., 1991)

(vi) have Western or Eastern European backgrounds rather than Oriental (Adlaf et al., 1989)

(vii) engage in risk-taking behavior including physical, monetary, social and ethical risks (Adlaf and Smart, 1983)

(viii) have high scores on depression (Smart et al., 1992)

(ix) live in single parent families where the mother is on welfare (Offord et al., 1989)

(x) engage in other problem behavior such as problem drinking, risky driving, joy riding, property damage (Vingilis and Adlaf, 1990)

(xi) sell drugs (Smart et al., 1992)

(xii) have run away from home (Smart et al., 1992).

The overall picture is that drug users, especially multiple users and heavy users, are engaged in generally deviant lifestyles of which drugs are only a part. Many problem behaviors among youth are related, and youth who use drugs heavily will usually be seen to have other problems with school, family and the legal system. Interventions must take account of the many serious problems that heavy drug users have and avoid a simple approach based only on stopping their drug use.

Drug Use and Ethno-Cultural Issues

We might expect that in a country like Canada there would be a strong interest in how ethno-cultural or racial factors relate to drug use. However, that interest is still dormant and few studies have been made. One reason is that ethnicity, culture and race are difficult to define and measure. An interest in them may appear to be racist and not politically correct. What is ethnicity? Does it include language, religion, country of origin, or only self-defined status? How do we classify people who fit into two or more religious or language groups? How far back should we go in looking at country of origin? Does it matter where your grandparents were born or only your parents or yourself in establishing ethno-cultural origins? None of these questions have very good answers. Because of the problems raised above, ethno-cultural factors and drug use are not much studied in Canada. The National Survey of 1989 included a question on ethnic origin but the results have not been made available. Adrian and Riggs (1993) have studied some of these results for women in the survey. They found that women who said they were English or Scottish in background were more likely than other groups (Canadian and other European chiefly) to be daily drinkers. Those who were French, German or Dutch were less likely to drink daily. However, German, Dutch and Irish women were more likely to have used cannabis; those who said they were English, Scottish, Italian or Portuguese were less likely than the average.

We do not have data on youthful drug use and ethnicity from the National Survey. The survey did show that there were no overall differences between English- and French-speaking people in alcohol use or drug use, but the results have not been shown for young people and older people separately.

Few school studies have studied ethnic differences in drug use. One reason is that school boards object to questions on ethnicity and to any questions that ask about parents. We have included those questions in a few of our surveys. For example, in the 1985 survey we established that students who had Western or Eastern European

backgrounds were more likely to drink and use drugs than Oriental students or those from East Indian backgrounds. Other school studies in Canada do not seem to include ethnicity.

Other ethnic groups that national studies in Canada do not take much into account are Inuit and native Indians. They may have been small in number in the 1989 National Survey, but it would have been interesting to see the results. Unfortunately, the ethnicity question in the National Survey of 1989 does not have native Indian or Inuit as categories. Numerous smaller studies have established that rates of drinking, solvent use and smokeless tobacco are probably higher among native groups (Smart, 1986; Hoover et al., 1990) than non-natives.

Our study in 1979 matched 64 native and non-native students according to age, sex, grade level, geographic region and parents' occupation (Liban and Smart, 1982). The native students had very similar rates of use of alcohol and drugs to the matched non-natives. However, when compared against all students, natives had higher rates of use of alcohol, solvents and other drugs. Probably much of the difference between native and non-native drug use can be accounted for by socio-economic factors, not some inherent tendency in the people themselves.

Reasons for Using and Not Using Drugs

The reasons given by youth for using drugs are very similar to those for alcohol (see Chapter 2). Young people try drugs because they are curious about their effects and just want to experiment. Most don't expect to continue drug use very long and most don't. Many young people are subtly influenced by friends to try drugs, but few say they are pressured to use them (Smart et al., 1991).

Reasons for stopping cannabis use have been examined in several studies. The most common reasons for stopping cannabis use in both the British Columbia and Ontario studies were "I was just experimenting" and "I was not interested any

more" (49% in both). Smaller proportions in the Ontario Student Drug Use Study gave health or financial reasons or referred to the disapproval of friends or parents. Very few (.1%) stopped because they were afraid of police. Generally, young people want to experiment with drugs; they stop when they become bored and want to get on to something else.

Reasons for not using cannabis are, of course, supplied mainly by people who are against using it, and we would expect them to be more negative about cannabis (Table 16). Most students in Prince Edward Island were not interested in cannabis or gave health reasons, but some said their parents would not allow it.

Different reasons were offered by students in the Ontario study for not starting cannabis. However, most said that none of their friends use, or that they would develop health problems. Fewer thought parents would find out (43.4%) and few worried about police detection (19.8%). Apparently those who do not try cannabis worry more than those who do try it about all the negative aspects of cannabis use — health, detection by parents and by police. Perhaps the non-tryers are more anxious about many aspects of life; they may get more monitoring of their drug use from both parents and friends and more negative information about drugs from them.

Attitudes Towards Drugs

Most studies of attitudes towards illicit drugs look only at cannabis, probably because it is the drug most often used. Most young people are very negative about cannabis. For example, the national study in 1985 (Garceau) found that about three-quarters of young people believed that it would harm unborn babies, affect reaction time and concentration, increase driving risk and was habit forming. About half believed that it would cause lung cancer and increase the risk of heart disease. About 18% even believed that it increased the risk of polio. As expected, those who used cannabis were less negative about it, but were still predominantly negative. For example, 86% of

monthly cannabis users said that it affected unborn babies, about half said that it was habit forming, that it caused lung cancer and heart disease. Only 4% of monthly users thought it caused polio. Obviously many users do not let their attitudes interfere with their cannabis use.

We have examined attitudes toward various drugs in our school studies (Table 16). Most students, but fewer users, find daily cigarette smoking and regular cannabis use to be very risky (60.7% and 73.3%). Fewer find risks in drinking, cannabis or cocaine if use is infrequent (30.7-42.7%). About half of non-users of cannabis anticipate a great or very great chance of health risk if they were to use cannabis in the next few years. Only 10% of users expect such risk. More students disapprove of drinking, cannabis and cocaine use from a moral perspective than worry about health effects. Health and moral concerns are at about the same level for cigarettes. In general, students differentiate among drugs and see some as mainly of moral concern, whereas some are both moral and health concerns. It is interesting that 86.2% of students disapprove of even trying cocaine once or twice, but only about 70% disapprove of daily drinking or smoking.

International Comparisons on Drug Use

Unlike the situation for alcohol, we do not have very good ways of comparing youthful drug use in different countries. There are records of arrests and drug seizures in many countries, but we don't know how well these reflect actual drug use. The number of drug arrests made probably depends on how many police there are in drug enforcement and how important police forces in general think it is to arrest drug users. Also, seizures of drugs in a particular country may often involve drugs in transit for sale elsewhere.

We are in a position to compare our drug use rates with some other countries, as comparable questions have been used. One of the most interesting comparisons is

with the United States (Johnston et al., 1990), as many of our drugs and drug fads come from there. Table 17 shows a comparison of drug use rates for students in Ontario and the U.S. The comparisons are for students in their last year of high school, but not for the same calendar year. It is obvious that for alcohol, cannabis, LSD and heroin the rates of use are about the same. However, for inhalants, cocaine, non-medical barbiturates and tranquillizers, rates of use are much higher in the U.S. than in Ontario. Also, about twice as many American as Canadian students have used some illicit drug.

In summary, cannabis is the most frequently used illicit drug, followed by LSD and stimulants. Rates of use are higher among 20- to 24-year-olds than among teenagers, and higher among males and those living in British Columbia. Trends in drug use have been downward for about 15 years, but there is no downward trend in the proportion of users with problems. Heavy drug use occurs more often among youth who are alienated from parents and teachers and have other deviant characteristics.

Table 13

Drug Use Among Students and Other Young People in Canada in Past Year

	Year	Cannabis	Solvents	Cocaine	Crack	LSD	Stimulants	Steroids	Heroin	Tobacco
Smart and Adlaf Ontario	1991	11.7	1.6	1.6		5.2	4.0[3]	1.1	1.0	21.7
Chamberlayne	1987	30.0	3.8	6.1	1.6	8.8	8.1	-	-	28.5
British Columbia	1990	24.9	3.1	6.1	2.0	9.3	7.1			27.7
Prince Edward Island	1982	24.9	-	1.8	-	11.0[5]	3.4		-	
Vancouver	1982	30.8	19.0	10.0		17.0	13.0[3]		2.0	26.3
Halifax (past six months)	1983	29.2	6.0			9.8[4]	12.4			35.1
Montreal	1984	15.0	.8	3.8						29.7
New Brunswick	1986	22.8		3.3						
University Students Ontario	1989	30.6	-	4.5	.3	2.6	4.9[3]	.4	.2	-
National Survey	1985	21.0	-	-	-	-	-	-	-	37
National Survey	1989	15.5	-	2.5[1]	-	4.6[2]	1.3	-	-	30.3

1. Cocaine or Crack
2. LSD, Speed or Heroin
3. Non-medical
4. Hallucinogens
5. Magic mushrooms

Table 14

Drug Use Among Students in Grades 7, 9, 11 and 13
Percentage Using Drug at Least Once During the Prior Year

Drug	1977	1979	1981	1983	1985	1987	1989	1991
	(N=4687)	(N=4794)	(N=3270)	(N=4737)	(N=4154)	(N=4267)	(N=3915)	(N=3945)
Tobacco	30.4	31.7	30.3	29.1	24.5	24.0	23.3	21.7
Cannabis	25.1	31.7	29.9	23.7	21.2	15.9	14.1	11.7
Glue	3.9	4.3	2.3	3.2	2.0	2.4	1.9	1.1 ***
Other Solvents	6.6	6.2	3.2	4.1	2.7	3.1	3.1	1.6 ***
Barbiturates (M)	14.2	12.8	12.5	11.0	4.4	7.8	2.4	4.4 ***
Barbiturates (NM)	6.6	6.8	8.1	5.2	4.4	3.3	2.2	2.2
Heroin	7.2	7.8	1.5	7.5	4.5	1.4	1.2	1.0
Speed	2.7	3.6	3.0	3.9	3.1	3.1	2.5	1.8
Stimulants (M)	6.6	6.8	6.1	5.2	4.3	4.3	3.3	2.6
Stimulants (NM)	7.2	10.6	12.1	15.4	11.8	7.8	6.5	4.0 ***
Tranquillizers (M)	8.6	6.8	7.5	6.5	4.7	7.8	3.1	2.9
Tranquillizers (NM)	4.9	5.3	4.9	5.0	3.3	3.0	2.4	1.6 **
LSD	6.1	6.8	10.2	8.6	2.0	6.8	5.9	5.2
Other Hallucinogens	4.3	5.3	4.7	6.6	4.5	7.8	1.9	3.3
Cocaine	3.8	5.1	4.8	4.1	4.5	3.8	2.4	1.6 **
PCP	-	-	2.5	2.0	1.7	1.3	1.1	0.5 **

Notes: (M) Medical use; (NM) Non-medical use; - Not queried; 1989 vs 1991 contrast: ** p<.01; ***p<.001.

Table 15

Drug Use Among Special High-Risk Groups (past year unless stated) - Percentage Using at Least Once

	Year	Cannabis	Solvents	Cocaine	Crack	LSD	Stimulants	Heroin
Smart et al. (Cocaine users)	1988	95.5	N/A	100.0	N/A	27.0	62.8	8.1
Radford et al. (Street Youth)[1]	1988	71	8	31	N/A	44	N/A	4
Smart et al.[2]	1990							
• Cocaine abusers in assessment		89	2	98	N/A	35[3]	25	23[4]
• Cannabis abusers in assessment		95	0	47	N/A	54[3]	39	16[4]
• Alcohol abusers in assessment		44	0	23		13[3]	2	17[4]
Smart et al. (Street Youth)	1990 1992	92 83	17 8	64 31	39 31	70 59	24[5] 9	13 4
Smart et al. (Drug Sellers)	1989	97	7.5	41.8	-	61.2	55.2	20.9

1 Ever used
2 Past 6 months
3 Hallucinogens including LSD
4 Narcotics including heroin
5 Speed

Table 16

Reasons for Not Using Cannabis

	Year	Reason	Percent Reporting
Killorn Prince Edward Island students	1982[1]	Physically harmful Makes me sick Morally wrong Interferes too much Might become dependent Parents won't allow Friends influence Not interested	31.4 2.0 9.0 7.3 6.3 11.9 .3 40.5
Smart and Adlaf Ontario Students	1991[2]	None of my friends use Likely or very likely police would catch me Likely or very likely parents would find out Likely or very likely to develop health problems	64.4 19.8 43.4 57.2
Garceau National Sample (12-19 years)	1985[1]	Harms unborn babies Affects reaction time More dangerous to drive Harder to concentrate Habit forming Slows you down Causes lung cancer Increases risk of heart disease Increases risk of polio	82 75 73 74 74 67 53 51 18

[1] Non users only: risks associated with cannabis
[2] All students

Table 17

Drug Use Rates in Ontario and the United States

	U.S. (Grade 12)	Ontario (Grade 13)
	1990	1991
Alcohol	80.6	84.1
Cannabis	24.5	21.5
Inhalants[1]	6.9	2.7
Cocaine	5.3	1.2
LSD	5.4	6.8
Heroin	.5	.6
Barbiturates[2]	3.4	1.8
Tranquillizers[2]	3.5	1.4
Any Illicit Drug	32.5	16.1

[1] Includes glue and other solvents
[2] Non-medical, non-prescription use only

Chapter 5

The Extent of Drug Problems

We saw in the last chapter that drug use is declining among youth in Canada. This should not lead us to believe that drug problems have disappeared or become insignificant. In fact, we still have a large and unchanging proportion of drug-using youth with serious drug problems. As with alcohol, our definitions of drug problems are varied and depend on our attitudes as much as on the facts.

Drug problems for youth are similar to alcohol-related problems. There can be legal problems involving court appearances, fines and jail. Other problems involve disruptions of relations with parents, other family members and friends, as well as poor school performance and early dropout. Physical problems, i.e., medical problems such as AIDS or dependence, are less common.

Another area of concern includes victimization of young people by parents or others who use drugs. We know less about this than in the case of alcohol, but there are some studies of how parent drug use affects fetal development. However, we know little of how parental drug use affects adolescent development or risk for drug use, except for our studies of street youth. Most drug use is infrequent, as we saw in the previous chapter, and therefore it results in very few problems compared to alcohol. It is the heavy, multiple drug user who is most likely to have physical, legal and social problems from use of drugs and from other related behaviors such as delinquency.

Legal Issues

Many people will say that any drug use (without a prescription) is a problem because it's illegal and the user might get caught. Parents are very likely to think any such drug use is potentially a legal problem. This is certainly true, but all young people

know that their chances of getting caught are very small. For example, we estimated in 1991 that 1.6% of students or about 7,360 students in Ontario had tried cocaine, but only 345 teenagers were convicted for cocaine offences in all of Canada.

Risk of apprehension for drugs is very small, and legal problems may often be seen by youth as no problem at all worth worrying about. Of course, if youth are caught, many will go to jail. In 1991, 2,088 people aged 15-24 were convicted under the Narcotic Control Act for all types of drug offences (possession, trafficking, importing, etc.). Of those, 895 or 43% got a fine, suspended sentence or discharge, whereas 57% went to jail, mostly for periods of less than six months, but 11% for two years or more. Jail terms are probably more often given to those young people convicted of trafficking or importing, but we don't have enough data to be sure. Of course, all youth who are convicted get a criminal record which is permanent unless they obtain a discharge, and few seem to bother. Involvement with the criminal justice system — even when it's a brief court appearance with a fine — remains an important drug-use problem. A permanent criminal record could result in young people being denied visas or prevented from getting certain jobs or entering the professions.

Many youth are still being convicted for drug-related crimes. Table 18 shows the number of convictions under the Narcotics Control and Food and Drug Acts for people aged 15-24. We should remember that cannabis convictions are not included here. Surprisingly, the Bureau of Dangerous Drugs stopped reporting those statistics in 1985. In that year there were almost five times as many convictions for cannabis as for all other drugs. Conviction rates for cannabis have probably fallen since 1985, as they were falling from a peak in 1981, but we can't know for sure. They would still probably outnumber all other drug convictions in this year.

If we set aside cannabis convictions, which now are a mystery, only cocaine and the hallucinogens generate many convictions among young people (Table 18). Cocaine convictions are more than half of the total and hallucinogens about a third.

Substances such as heroin, PCP and prescription drugs lead to few convictions for young people. However, young people account for more than 50% of the total convictions involving hallucinogens and PCP. They account for few heroin and prescription drug convictions. Although Table 18 does not show it, conviction rates for males are five to six times as high as for females.

Self-Reported Drug Problems

Much of our knowledge of drug problems comes from surveys in the general population. They get at problems which are social in nature and are frequently known only to the drug user and his or her immediate family. Of course, very few self-reported problems get into the official records of courts, hospitals or other institutions. Hence we need these self reports to provide a complete picture of what young people are doing.

Several Canadian studies have asked young people about drug problems, but far fewer than those which ask about alcohol problems. Perhaps it is assumed that drug problems are unimportant or too hard to study. In Table 19 we see that various national and provincial studies have asked about several drug problems but almost all of these studies have enquired only about cannabis. The most common problems seem to be those from acute drug effects. For example, 41.8% of student cannabis users in Ontario reported confusion, anxiety or other unpleasant effects from the drug, and 38.7% in Prince Edward Island reported being restless, nervous or uptight. In several studies, 25% to 30% of cannabis users reported skipping class or trouble with school or homework, and there were probably also acute effects. About a quarter of cannabis users reported recurrences of the experience. Fewer reported problems with family or friends. Health problems were experienced by about 12% of moderate cannabis users in Garceau's national study. However, serious problems requiring medical attention affected only 1% to 4% of youthful drug users in the Ontario

student survey. Reports of arrest or problems with police came from 4.3% to 10.6% of drug users. Not surprisingly about 11.8% of drug users in the Ontario study wanted to use fewer drugs. In general, drug users reported many health and social problems from their use, but only a minority seemed to want to give them up completely. In Garceau's national study, 64% of moderate cannabis users reported no social, health or legal problems. Unfortunately, we have little information on the problems experienced by users of more dangerous drugs such as cocaine, heroin or hallucinogens.

Trends in Self-Reported Problems

It is difficult to examine self-reported drug problems in Canada, as only the study of students in Ontario has long-term data. Some of those data, covering 1979 to 1991, are shown in Table 20. It can be seen that in 1991, few students reported drug problems such as being arrested or warned by police, seeing a physician or having school counselling for a drug problem, having their parents think they used too much, or wishing to use less (0.7-2.8%). Rates of all these problems have declined for students in general since 1979. Most of the reductions are large, except for seeing a school counsellor, for which there is no change. However, among cannabis users drug problems have remained at about the same level. This suggests that although fewer students have drug problems now, and there are fewer drug users, problem levels remain high for those users.

Hospitalization for Drug-Related Problems

Many young people are admitted to hospitals because of drug problems; Table 21 shows some of the numbers for 1987-88. In total, 5,490 people aged 15-24 were admitted for a drug-related problem, of whom about 59% were female. This is probably because these hospital statistics include many attempted suicides from

poisonings, and drugs are the favorite method of suicide for females. About 75% of the cases were poisonings, including both accidental and suicidal types. Cases of drug dependence are next in numbers, followed by non-dependent drug use and psychoses. In general, people aged 15-24 constitute a large proportion of the drug-related cases in hospital. They represent only 14.7% of the population, but account for 30.6% of the drug cases.

During the 1980s the numbers of hospital drug cases remained essentially unchanged for the age group 15-24. The same is true for cases treated in psychiatric hospitals, which saw far fewer cases (only 515 in 1988). However, in both general and psychiatric hospitals, admissions for drug psychoses were decreasing somewhat.

Drug Use and AIDS/HIV Infection

AIDS has become one of the major infectious diseases of the 20th century, with more than 500,000 cases worldwide. Almost half of the known AIDS cases are in the United States and hence AIDS represents a serious potential risk for Canada. To date, there have been 6,560 cases in Canada, with 4,112 deaths representing 63% of all cases (Sutherland, 1992). An important risk factor for AIDS in the U.S. has always been intravenous drug use and the sharing of needles which often accompanies it, but in Canada AIDS is rarely related to injection drug use (Table 22). Only 7.5% of total newly diagnosed cases in 1991 had intravenous drug use as a risk factor. However, this proportion has doubled since the early 1980s, and drug use could be an important factor in the AIDS cases to come. We know that 1.3% to 4% of injection drug users seen in treatment centres in Canada are HIV-positive and these rates appear to be increasing (Smart, 1990). These rates are very low compared to the U.S., where rates are as high as 63% in some studies, but on average about 20%.

Both injection drug use and needle sharing are higher than they should be among youth. Smart et al. (1990) showed that in 1989, 4.9% of Ontario students injected

drugs but of those, about 73% were using medically prescribed drugs such as insulin. About 4% of those who injected drugs, or .2% of all students, reported sharing needles. That meant that about 2,700 students in Ontario were at risk of HIV infection. AIDS risk is very high for some heavy drug-using populations such as street youth. However, by 1992 (Smart et al., 1992) the rates of intravenous use and sharing had gone down greatly, probably due to the large amount of information about the hazards of sharing. Also, several needle exchanges had opened in Toronto where users could obtain new needles at no cost and receive drug-use counselling as well.

Drugs and Driving

Since most young people drive cars and many use illicit drugs, they should often be involved in drug-related accidents. Unfortunately, we have little direct information on drug use and driving, probably because there are no simple roadside tests for drugs other than alcohol. To illustrate the problem of drugs and driving we can look at some Ontario accident statistics. In 1985 there were 331,576 accidents; more than 20,000 involved alcohol, but only 127 reportedly involved drug impairment on the part of the driver. No drug tests were made for impaired drivers who were fatally injured, according to the Annual Report for Road Safety in 1985 (Ontario Ministry of Transportation, 1985). However, these drivers would be the most likely to be using drugs.

Very few studies of youth and driving risk from drugs are available for Canada. However, Donelson (1987) examined 2,655 fatal motor vehicle accidents and had tests for both alcohol and cannabis made for those who died within an hour of the accident. For males aged 14-24 with no alcohol level, fewer than 10% tested positive for THC, but of those with low alcohol levels (0.1%-0.07%), one third also had THC in their blood. Of those with high alcohol levels, 27% had THC in their blood.

Females had very low rates of both alcohol and THC. Alcohol impairment was far greater than cannabis use for males, but drugs are still a significant problem meriting more research. Of course, for alcohol we know the level of impairment from the blood level, but for the cannabis cases we know only that cannabis had been used recently. We do not know how much it impaired the drivers. Also we know nothing about impairment by cocaine or other drugs in young Canadian drivers.

Treatment for Drug Dependence

With our current information, it is very difficult to find out just how many young people are in treatment for drug dependence in Canada (see Chapter 6). We can make some rough estimates of how many might need it, but there is no national system to count them or provide the treatment facilities.

How many young people might really need drug-dependence treatment? Based on our school studies, perhaps 4% have problems large enough to warrant treatment for drug dependence. Of course, many of them could reduce their drug use with the help of relatives or friends, or by joining some self-help group. Saying that they "warrant" treatment is not to say all need it or must have it. We know that many people with drug problems can deal with them on their own or with a little non-professional help.

If we look again at the 4% figure, it is probably an underestimate for all youth, as it leaves out dropouts and high-risk groups who are not in school. In this respect we should note that half of the street youth population in our study would warrant treatment, and few had received it. We have estimated that there might be as many as 10,000 street youth in Ontario (Smart, 1991). That could mean as many as 25,000 to 35,000 nationally. Other dropouts may also have high levels of need for treatment. The 4% figure could underestimate those who might need treatment or other interventions. If we apply that 4% to the population of Canada aged 15-24, it

represents about 157,000. Of course we need to sharpen our estimates for the number who might need some non-professional intervention and the number who need professional treatment.

Victimization of Youth from Others' Drug Use

Victimization of friends and relatives by those who take drugs is not well understood in Canada. We have more information for alcohol, but not enough there either. Most victimization studies for drugs have focused on studies of fetal and neonatal effects. However, one study has examined how street youth were affected by drug use in their families. Here we focus on studies of direct impact and set aside for consideration elsewhere the notion of "societal victimization." That notion is that all people in society become the "victims" of those who import, sell or distribute drugs. Certainly as taxpayers we all pay for the health and legal costs of drug abuse, but we rarely feel like victims in the usual sense unless we or our families are affected directly by drug use.

The decade of the 1980s saw an epidemic of cocaine and crack use in many American cities. For example, the number of people using cocaine in the U.S. expanded from 5.4 million to 22.2 million between 1974 and 1984 (Kozel and Adams, 1986). With the U.S. epidemic came a totally new interest in "crack babies," or the fetal effects of crack and cocaine. Vast numbers of pregnant mothers exposed their unborn children to the effects of cocaine for the first time, as well as to other drugs such as cannabis, alcohol and narcotics. Estimates of illicit drug use by pregnant mothers, based on their statements, were around 10% to 15% (Albersheim, 1992). However, according to one study in a Detroit clinic, drug screening tests showed that 44% of pregnant mothers had used illicit drugs, whereas only 11% had admitted it in interviews. These findings and concern about the prevalence of drug-related fetal effects have led to a large amount of research on fetal risks in the U.S.

(see for example, Smart, 1991; Chasnoff et al., 1987; Committee on Drugs, 1989). In general, the results show that drugs such as cocaine lead to babies who are irritable, wakeful, hyperactive and tremulous, and who feed poorly. They fail to thrive, are difficult to comfort and may have convulsions (Albersheim, 1992). Because high-risk mothers frequently use alcohol and other drugs with cocaine, not all of the neonatal problems can be attributed to cocaine.

Fortunately, there was no real "cocaine epidemic" in Canada, at least not on the scale seen in the United States. Studies of adults showed that annual use of cocaine (Adlaf et al., 1991) reached only 2.1% in 1989, and there was relatively little growth in the 1980s; about 1.7% used cocaine in 1984. Crack cocaine never caught on in Canada in the general population, although many multiple drug users did like it. Fewer than 2% of adults in Ontario reported ever using cocaine, and there was no increase in use from its first inclusion in our survey in 1984 to the most recent survey in 1991. For these reasons research on fetal drug effects did not develop much in Canada, and only a few studies have been made.

The largest Canadian study of possible drug effects on fetal and neonatal development was conducted in a Toronto hospital program for high-risk expectant mothers (Graham and Koren, 1991). It included 1,625 women, of whom 91 or 5.6% admitted to cocaine use, almost all during their pregnancy. More of the cocaine users than non-users were young, more were single and of low socio-economic status. Cocaine users were also frequently users of other drugs. However, their use of cocaine was mostly infrequent. Only 20% had used it as often as 10 times, 10% used crack and none were addicts. No information was given about the long-term effects of drugs on children born to these mothers. However, a later study of the same group did show that babies from cocaine-using mothers were significantly smaller, more often premature and nearly half had to be resuscitated.

We should remember that all of the women in the Graham and Koren program were high-risk and referred or self-referred because of exposure to drugs, chemicals or radiation. Probably mothers in general would have lower rates of drug use during pregnancy and hence less exposure to fetal abnormalities.

An interesting study of the effects of smoking, caffeine and alcohol has been reported for 10 communities in Inuvik, N.W.T. (Godel et al., 1992). This included 162 women (56 Inuit, 37 Indian, 37 white and 31 mixed race) who presented for prenatal care in the late 1980s. Use of all three drugs was most common among Inuit and Indian mothers. Smoking mothers compared to non-smokers had babies that weighed less, were shorter and had smaller head circumferences. Women who ingested more than 300 mg of caffeine (about two and a half cups of coffee) per day had lighter, shorter and thinner babies, who were delivered early. About 66% of women abstained from drinking during pregnancy. Babies of drinkers were not different than non-drinkers, but heavy drinkers had babies with smaller heads. The authors of the report found strong reasons to suggest new education programs for mothers to discourage alcohol and tobacco use during pregnancy.

Several studies in Toronto throw some light on later effects of family drug use on children. A study of Children's Aid cases in Toronto (*Globe and Mail,* 1992) found that 12% of children in CAS care had families where crack cocaine was used. Children of mothers using cocaine were more exposed to poverty and violence and more likely to have children removed from the family. Crack-using families were typically led by single mothers who were young (18-24) and on welfare. They were often living in subsidized housing (46%) or crack houses (50%). Some newborns (40%) were addicted to crack and most of the older children had developmental problems. Because of the many drugs used and the poor economic and health circumstances in the family, not all of the problems seen were necessarily due solely

to crack use. However, parental drug use is an important negative factor in the lives of some children in welfare-supported families.

Our studies of street youth have also shown that parental drug use is a factor in youth leaving home for the street (Smart et al., 1990; 1992). Among street youth we found that 77% had family alcohol problems, and for 36% that use was a factor in their leaving home. About 45% had family drug problems and for 9% that use was a factor in their leaving home. We need better programs to deal with family alcohol and drug problems at an early stage and to prevent this sort of victimization.

Summary

Drug problems for young people include arrests and criminal records, as well as incarceration. Self-reported drug problems have been best studied for cannabis. Most cannabis users do not report problems, but up to 12% do have serious problems. Self-reported drug problems have declined since 1979 for students in general. However, they have not declined for cannabis use. Driving-related drug problems are not well understood. Nor are the problems associated with the effects of parental drug use on fetal or later child development.

Table 18

Total Convictions in Canada Under the Narcotic Control Act, 1991

Age Groups	Food and Drugs Act		Narcotic Control Act				
	1.	2.	Cocaine	Heroin	PCP	Other Drugs	Total
15-19	0	206	345	0	45	10	615
20-24	11	292	1534	50	61	44	1981
All Ages	50	861	6902	412	193	1197	9565
Ages 15 - 24 as a Percentage of All Convictions	16.7	57.8	27.2	14.3	56.5	4.5	21.3

1. This includes convictions related to amphetamines, barbiturates, diethypropion, methamphetamine, methaqualone, methethylphenidate, phentermine and others.
2. This includes convictions related to hallucinogens such as LSD, MDA, psilocybin and others.

Table 19

Reported Problems from Cannabis or Other Drug Use Among Users

	Year	None	Problem Due to Drugs	% of Users Reporting	
Smart and Adlaf Ontario Students[1]	1982		Recurrence while not using Confusion, anxiety or other unpleasant effects while using Sought medical attention for use (past year)	26.4 41.8 1.1	
Killorn Prince Edward Island Students[1]	1982		Missed half day of school Disciplined at school Skipped classes Damaged property Incomplete school work Arrested Fighting Stale Accident or physical injury Restless, nervous, uptight Felt ill (time period not given)	24.4 4.1 29.8 8.2 30.4 4.3 15.5 10.4 6.8 38.7 22.7	
				Total	Moderate Users
Garceau National Sample[1] Aged 12 to 19	1985	11%	Tension with family/friends Trouble with school or work Problems with health Difficulties with driving Trouble with the law Injuries due to accidents/violence None of the above (past year)	7 9 6 4 7 5 86	20 27 12 9 13 10 64
				1.	2.
Smart and Adlaf[2]	1991		Arrested or warned by police Seen a physician Seen school counsellor or nurse Parents think they use drugs too often Wish to use drugs less (past year)	1.5 0.7 0.7 1.2 2.8	10.6 3.5 3.7 6.8 11.8

1. Refers specifically to cannabis and rates are for cannabis users.
2. Refers to drug problems in the total student sample due to any illicit drug.

Table 20

Self-Reported Drug Problems Among Ontario Students

	1979	1981	1983	1985	1987	1989	1991
AMONG TOTAL SAMPLE							
(n)	(4794)	(3270)	(4737)	(4154)	(4267)	(3915)	(3919)
Arrested or warned by police	3.3	2.7	2.5	2.5	1.6	1.3	1.5
Seen physician	1.2	0.8	0.8	0.7	0.9	0.7	0.7
Seen school counsellor	0.9	0.8	0.7	0.5	0.8	0.5	0.7
Parents think students use drugs too often	2.5	2.7	1.6	1.6	1.4	1.0	1.2
Wish to use less	3.3	5.0	5.7	5.0	4.0	3.3	2.8
AMONG CANNABIS USERS							
(n)	(1510)	(1002)	(1304)	(907)	(701)	(570)	(515)
Arrested or warned by police	10.5	9.7	10.3	9.2	9.2	2.7	10.6
Seen physician	3.8	0.9	3.3	3.2	5.4	0.7	3.5
Seen school counsellor	2.9	2.9	2.9	2.3	4.8	3.4	3.7
Parents think students use drugs too often	7.9	9.7	7.4	7.3	8.5	6.8	6.8
Wish to use less	12.4	18.0	23.4	22.9	24.2	22.4	11.8

Table 21

Hospital Separations for Drug-Related Cases in Canada - 1987-88[1]

	15 - 19	20 - 24	Ages 15 - 24 as a Percentage of Total
Drug Psychoses	102	160	14.8
Drug Dependence	217	498	3.2
Non-Dependent Use	213	168	0.3
Complications of Pregnancy	19	38	3.8
Childbirth and Puerperium (all drug dependence)			
Poisonings - Opiates and Related Narcotics	47	41	21.9
- Analgesics, Antipyretics and Salicylates	718	305	42.9
- Sedatives and Hypnotics	920	505	42.3
- Antidepressants	135	185	12.3
- Tranquillizers	208	257	19.4
- Other Psychotropic Agents	274	350	17.3
	80	50	37.5
Total	**2933**	**2557**	**30.6**
	(5490)		

1. People aged 15 to 24 were about 14.7% of the population of Canada in 1988.

Source: Canadian Profile: Alcohol and Other Drugs, 1992.

Table 22

Trends in Injection Drug Use as a Risk Factor in AIDS in Canada

Risk Factor - Number of Cases		Year								
		Pre 1984	1984	1985	1986	1987	1988	1989	1990	1991
1.)	Injection Drug Use (IDU)	2	0	2	1	12	13	24	20	31
2.)	IDU and Homosexual/Bisexual Activity	5	3	9	21	27	30	45	42	28
3.)	Total of 1 and 2	7	3	11	22	39	43	69	62	59
4.)	Total Cases in First Year of Diagnosis	95	155	867	578	867	1017	1167	1050	788
5.)	1 and 2 as Percentage of Total Cases	7.4	3.9	3.1	3.8	4.5	4.2	5.9	5.7	7.5

Source: Sutherland, D. Surveillance Update: AIDS in Canada. July 1992.

Chapter 6

School-Based Alcohol and Drug Education

Introduction

Alcohol education in schools has had a long but undistinguished history — at least until recently. Some of the very first efforts to prevent alcohol problems began with school-based programs. Temperance organizations founded in Victorian times made school children a target for their first efforts. Temperance was an official part of the health curriculum in most provinces in the early part of the century. Indeed, temperance presentations to students were a feature of many Canadian schools up to the 1950s. Even in the 1980s, organizations such as the Women's Christian Temperance Union ran special programs in selected schools. Of course, schools have moved towards more scientific presentations and to a more global approach which includes tobacco and other drugs as well. As we will see later, much research leads to disappointing conclusions about the effectiveness of school alcohol education. However, there are many inconsistencies, and newer approaches involving school policies and early intervention may be more effective in future. Because schools are so significant in the lives of children, it is important to focus on these newer efforts until we find effective programs.

Why Focus on Schools?

As several provinces such as Ontario have made alcohol and drug education mandatory, many people have wondered about the current focus on school alcohol and drug education. Their main questions are:

(i) if the results are mediocre, why continue?

(ii) why not find some better avenues?

One reason is that alcohol and drug use begin at early ages. Most young people first drink around the age of 15, and they learn to drive soon after. Much research also shows that if people don't smoke cigarettes before the age of 18, they probably never will. We know, too, that some types of illicit drug use — e.g., crack, hallucinogens and stimulants — occur mainly among young people. There is obviously a real need for someone to intervene when young people are starting their drug use.

Why not leave alcohol and drug education to parents? That certainly might be ideal, but we are not sure how many parents want to do it or could do it. Probably many parents expect schools to undertake that type of education. For example, in a recent policy survey in Ontario (Room, 1992), 82.7% of people wanted alcohol and drug programs increased, but about 75% also said that preventing alcoholism was the total or near total responsibility of the individual. It seems that public attitudes about who is responsible are in conflict.

Typically it is difficult to get parents mobilized or even together to do anything on a massive scale. Parents are usually not organized and are busy with other activities. However, nearly all children attend school until the age of 16 or so, and therefore they represent a captive audience: we know where to find them most of their early lives. Parent education is much harder than teacher training and classroom education.

It is clear, too, that schools have recently taken on more health education than could conceivably be done by parents — for example, sex and reproductive education, and HIV- and AIDS-related issues, both of which are mandatory in some provinces. More onus seems to be put on the school to undertake health education.

There also seems to be a tacit agreement in our society that schools, and not the family, are mainly responsible for alcohol and drug education. We make schools, not parents, legally responsible for it. Nor do we make parents legally responsible for their children's drug use or drug trafficking. Most parents probably prefer that schools do the education required to prevent drug abuse. Many would feel inadequate

and too poorly trained to do it themselves. There is also the general feeling that the family is a closed, private institution and that too many rules should not be imposed on family life. In fact, the family is one of the most closed institutions we have and one of the most difficult to change in any planned way. All in all, it is probably best that drug education is done largely in the school system — but it must be done well.

Some, but not many, students seem open to changing their alcohol- and drug-related behaviors. In our Ontario study, only 4.7% of students wanted to drink less, and 3% wished they could use fewer drugs (Table 23). Although 16.1% of students, or more than half of the smokers, had tried to quit smoking in the past year, about half found it difficult to quit. Perhaps the best bet and the greatest need for school-based prevention programs concerns smoking.

Another reason for interest in school-based programs is the standing that schools and teachers have with students. Our survey also asked how stressed students felt about various areas of their life (Table 24). About 50% of students felt their lives were fairly or very stressful and about a third felt that their family problems and relationships with parents were stressful. However, far fewer felt that their relationships with teachers or school rules were stressful, although homework did cause stress for many students. This indicates that perhaps stress-related topics such as alcohol and drugs (and many sex-related topics that cause even more stress) are better dealt with by teachers. In fact, we know relatively little about how parents actually deal with such topics. For the time being, however, they seem to be the province of schools.

We could argue, at least in Canada, that whatever schools and parents are doing now about alcohol and drugs is working and should be left alone. For example, in the 12 years from 1979 to 1991, cannabis use fell from 31.7% of students reporting it to 11.7%, and cocaine use from 5.1% to 1.6%

We have strong evidence that the decline in alcohol and drug use is positively associated with increased exposure to classroom drug education. We asked students

about their exposure to alcohol and drug education with the question: "During the past school year (September 1989 to June 1990) how many classes or lectures did you have that talked about alcohol (or tobacco or cannabis)?"

Figure 4 shows the relationships between trends in alcohol, tobacco and cannabis education and trends in use. We see that as the level of alcohol education increased overall, alcohol use declined. This relationship is also obvious for each grade level (correlations are negative and statistically significant overall and for all grades). The relationships for tobacco use and tobacco education are more difficult to see, because only three years of data are available. However, the overall relationship and that for Grades 7, 11 and 13 are statistically significant, and show that as tobacco education increases, tobacco use tends to decline. The trend relationships are about the same for cannabis as for alcohol, except for Grade 9. As cannabis education increased, the reported use of cannabis declined for Ontario students. However, Grade 9 was an exception to this pattern.

Exposure to alcohol and drug education in schools is only one factor related to the decline in student alcohol and drug use. There are other forms of alcohol and drug education, including those in the mass media and the efforts that parents make to educate their families about drugs. There are also subtle changes in peer pressure and public attitudes about alcohol and drugs which favor more cautious use of drugs. Unfortunately we do not have any details about them.

If the current trends continued, cannabis use would virtually disappear from Ontario schools (i.e., would be below 1%) in about 25 years, and cocaine in only six years. Drugs such as glue, solvents and heroin are now around 1% or the "disappearance" point. Of course, alcohol and tobacco will remain a problem for far longer, although their trends are also downward. It is difficult, however, to argue for greatly increased alcohol and drug education in schools and easier to argue for

maintenance of the current level. What we probably need most is an improvement in the quality and effectiveness of programs.

Some Background on Current School Programs

Most of our school programs include information about various drugs. Alcohol is the drug most often included, but programs usually include material on cannabis, tobacco and other drugs as well. We do not usually have programs focused on a single drug, e.g., cannabis or cocaine, but rather "omnibus" programs. Usually these programs are given as part of the health curriculum, but they may be separate programs. In a few cases, the material may be worked into other subjects (e.g., botany, history). Almost all of the programs involve presentations by the classroom teachers, but a very few involve outside experts such as doctors, drug research specialists or former addicts. These programs provide a wide variety of information packages on drugs — videotapes, magazines, comic books and audiotapes prepared by health agencies.

Often this information is supplemented by special highly intensive programs in schools. One example is "Drug Awareness Week," held in several provinces. It features special lectures, talks, posters, video displays, contests, plays based on drug topics, etc. Schools often put on their own versions of Drug Awareness Week but evaluations of them don't seem to be available.

Usually the aims of school-based drug education are:

(i) to get students to drink alcohol responsibly, i.e., without getting into trouble such as drunkenness, arrests or drinking-driving;

(ii) to get students to stop smoking cigarettes or not to start for health reasons;

(iii) to get students not to try illicit drugs at all, chiefly for health reasons rather than safety, because drugs and driving is not an important issue with young people.

Most drug education programs have three purposes:

(i) *informational,* i.e., the transmission of information about the harmful effects of drugs, based largely on a health belief model — if people know the dangers of drugs, they won't decide to use them;

(ii) *attitudinal,* i.e., changing people's attitudes so that they view drugs in a negative way, and increasing their levels of self-esteem and confidence so that they won't need them;

(iii) *behavioral,* i.e., getting students to abstain from using drugs and to stop if they are already using them. Often emphasis is placed on "refusal" skills, i.e., how to say no when offered drugs by other people.

One problem with drug education programs is that they don't reach all students. For example, in Ontario, where drug education is mandatory, 21.6% of students (Table 25) said that they had received no alcohol education in the past year. About 50% said the same for cannabis, 33.7% had had none for tobacco and 36.0% none for other drugs. Of those who did get some education, most had only one or two classes and very few had as many as seven classes.

In general, students do not rate these classes as very effective educationally. Most have little trust in teachers as experts on drugs. Many find physicians and even former drug users more credible authorities on drugs, and these kinds of people are not often involved in drug education. Nor is it practical to expect such people to get more involved in drug education, as the work required is simply too great. For example, there are almost two million students in Ontario schools, about 4,500 schools and about 60,000 classes. Only classroom teachers are numerous enough and have enough time to be much involved in drug education with this number of students.

The Effectiveness of School Drug Education

Although there is a long history of alcohol and drug education in schools, there are relatively few reports of sophisticated research. Most of the material available describes the programs, shows how to put them on, indicates what materials are required, and some even advises how teachers should be trained to carry out the program. However, there are very few studies indicating whether the program has been effective and for what types of students. Many studies claim to have a useful program effect — that is, students learn from the program and many even use drugs less often. However, many program evaluations do not include a control group of students who did not get the program, so we cannot be sure that the same changes would not occur even if the program did not exist.

There have been many reviews of drug education effectiveness, and most come to essentially the same conclusions (Moskowitz, 1989; Eliany and Rush, 1992; Gliksman and Smythe, 1989). One conclusion is that the impact of drug education programs has been inconsistent. Some programs have positive effects, a few have negative effects, but most tend to have mixed effects, i.e., some positive and some negative effects for some groups, on some variables studied. The most common impact of drug education programs is an increase in knowledge levels. Almost all programs can show that students gain some knowledge about drugs and their harmful effects. A small number of programs can show an increase in negative attitudes towards drugs, more caution on the part of users and less desire to try drugs, greater self-esteem and better decision-making. However, many programs do not show these effects.

The most difficult changes to create with drug education are behavioral ones. It has been difficult in many programs to show decreases in actual drug use greater than those occurring in control groups. In several of our studies, we have found overall decreases in drug use such as alcohol and cannabis but increases in use at some grade levels in some schools (Goodstadt et al., 1982, 1983). In his review of the literature

(1980), Goodstadt identified 15 studies in which there was evidence of negative findings. He concluded that "some negative impact of drug education programs occurs but they are more broadly beneficial." Many educators are, however, concerned that school drug education programs have the potential to increase experimentation with drugs.

There are many reasons for the inconsistent or sometimes negative effects of drug education. For example, reviews of the programs indicate:

(i) Many programs are not theoretically sophisticated and are not based on valid ideas of why young people use drugs (experimentation, peer pressure).

(ii) Many programs are of very short duration and most consist of fewer than five classes (many have only one or two). Such programs should not be expected to have any great impact. Longer programs usually have greater positive effects.

(iii) Often programs do not use the most trusted sources for students, e.g., doctors, nurses, scientists, pharmacists.

(iv) Much evidence indicates that drug users and heavy drug users know more about drugs than do non-users. The heaviest users are not short of information about drugs and sometimes know more than the teachers. Drug education may be most effective for non-users of drugs.

(v) Teacher preparation for drug education is sometimes inadequate. Teachers are often uncomfortable with the content of "drug" courses. They require teacher training in the courses and this is very difficult to get in some school systems. If teachers are not comfortable with the material, they will not use it.

Despite these problems with drug education, some information is available on the types of courses with the best results. In order to maximize results, the courses should be theoretically well developed, should consist of 10 lessons or more if possible, should be aimed at non-users and backed by sufficient teacher preparation.

Some information on types of programs is also available. Tobler (1986) reviewed 143 drug prevention programs, almost all of them school-based. All of the programs contained some evaluation, whether through an experimental or quasi-experimental design. About 30% had some problems with implementation and only 45% mentioned teacher training, so many of the programs were not ideal. Tobler came to the following conclusions:

i) *Knowledge Only* (trying to improve knowledge levels) and *Affective Only* (no reference to drugs but aiming for increased personal growth) programs had results that were lower than the mean for all programs, and should be discontinued.

ii) Multi-model programs, i.e., those attempting to create changes in more than one area of Knowledge, Affective Peer Influence, Alternatives (encouraging more activities in competition with drug use) were superior to single-modality programs.

(iii) Peer Influence Programs, i.e., programs focusing on peer influences and refusal skills (just say no), were the most effective of all.

(iv) Knowledge changes do not necessarily lead to attitude or behavior changes.

(v) The Alternatives approach showed the best results with special populations, e.g., those at highest risk and those already using drugs.

Peer programs were of short duration (less than 10 hours) and were the best for producing school-based effects on drug-using behavior. Alternatives were best for high-risk groups, but required an average of about 182 hours. The most cost-effective approach, and the most appropriate for school situations, is certainly the peer influence model. Although this model has mostly been used with students, much adult drug use is also subject to peer influences. There is no reason the model should not

work well in adult drug prevention programs if carefully adapted to the circumstances of adult drug use.

Some Canadian Research on Alcohol and Drug Education

Most drug education evaluations have been made in the United States. Although many are valuable, the cultural differences between the U.S. and Canada are large enough to mean that our programs need to be different. Our programs tend to emphasize alcohol and tobacco and to de-emphasize the use of illicit drugs, whereas many American programs do the opposite.

Several studies have been made of alcohol education programs but few are exclusively concerned with other drugs. For example, Goodstadt et al. (1982) examined the effects of two sets of 10 alcohol lesson plans for Grades 7-8 and 9-10. Results were mixed but generally positive:

(i) Both programs increased knowledge levels. Among males, attitudes became more favorable to alcohol after the program.

(ii) Effects on alcohol-related attitudes were mixed - attitudes among drinkers became more pro-alcohol but for non-drinkers they became less pro-alcohol.

(iii) For students in Grades 7-8, the program had no effect on expectations to use alcohol less often, but Grade 9-10 students were more likely to expect to use alcohol less in the next year than were controls.

(iv) The size of the effects on expected alcohol use depended on the number of lessons taught. This research shows that alcohol education can have complex, even contradictory effects, and that effects are different for different groups.

A later study by Goodstadt and Sheppard (1983) examined the effects of three approaches: a cognitive program, a decision-making program and a values clarification program. Students endorsed the cognitive program most strongly. It

improved levels of alcohol knowledge (though not substantially), whereas the other programs did not. There were no program differences in relation to attitude change. For the cognitive and decision-making programs there were no improvements in reported alcohol use or expectations to use. However, those in the values clarification program increased their alcohol use. There were problems in presenting decision-making and values programs, as these require students to learn in a way to which they are unaccustomed. Nevertheless, the results show the inconsistency typical of many program evaluations.

Schlegel's (1984) results are somewhat similar to those described above. He compared a "facts" presentation to others with values clarification and decision-making components. Those in the "facts" group had lower alcohol consumption after the program, but those in the other groups showed no improvement.

Several approaches have departed from the usual classroom style of didactics into drama. For example, Gliksman et al. (1983) found that a live performance about drinking put on by students contributed to short-term changes in knowledge, attitudes and behavior. Similarly, an evaluation of a comic book on drugs called "Zeke and the Indoor Plants" in Alberta found it had an impact on knowledge levels. More programs of this sort may help to improve the impact of school-based alcohol and drug education.

Another novel approach at the university level involved both persuasion and policy changes. The Campus Alcohol Policy and Education program (CAPE) was evaluated by Gliksman et al. (1990). This program included:

- a variety of presentations to students (booklets, posters, talks) on drinking appropriately and without problems;
- and efforts to get university tavern managers to prevent excessive drinking by students.

Students exposed to the CAPE program, compared to those not exposed to it, improved their attitudes about alcohol, increased their intentions to use it appropriately and reduced their reported consumption.

Smoking Prevention in Schools

As with alcohol and drug education, smoking education has been disappointing in its results, and the extent of continued promotion is controversial. We found in our studies that there was less smoking education than alcohol education and most students in Ontario received little. However, advocates of smoking education have stated that "the time is at hand for provincial-level voluntary and professional health agencies to advocate for social influences programs to be widely implemented as an important component of school curricula" (Garcia et al., 1988).

Much of the argument for social influences programs in Canada rests on three studies. The first, the Waterloo Smoking Prevention Project (Flay et al., 1985) was carried out in 22 matched schools assigned to experimental and control groups. The experimental schools got six one-hour smoking issues classes in the early part of Grade 6. These classes included information about smoking and practice in decision-making. Two more classes were given at the end of Grade 6, two in Grade 7 and one in Grade 8 to maintain the commitments and knowledge levels about smoking. By the end of Grade 7 more than twice as many students smoked in the control vs. the experimental schools (8% vs. 18.7%). Unfortunately, problems with these results have been pointed out, e.g., the sample sizes were small and non-random, there may have been a Hawthorne Effect, the program did not prevent regular smoking, only infrequent smoking (less than once a week), and the follow-up period was short (Kozlowski et al., 1989).

A later study (Best et al., in press) used 66 schools with 4,120 children rather than the original 654, but essentially the same program approach. However, it found

"minimal program impact at the 30-month follow-up." These results indicate that caution is needed about expanding social influence programs into schools without further research and program development.

A later trial of a Peer Assisted Learning (PAL) approach has also produced equivocal results. This trial was done in Calgary (Abernathy and Bertrand, 1992) and it addressed some of the earlier problems with the Waterloo studies. Schools were randomly assigned to experimental and control groups, and a large sample was used (7,508 students). Also there was a four-year follow-up. The program gave students information about reasons for not smoking and the skills to resist peer influences to smoke. There were some indications of an effect for males. Males exposed to the entire program of six lessons in Grade 7 were less likely to start smoking (but not those exposed to less than six). However, males in Grades 6 and 8 were not less likely to smoke. There were no significant differences for females at any grade level. The results did show a limited effect of the program on initiating smoking, but with such weak influences much remains to be done.

Finding the right smoking program may be difficult, but even without one, students are decreasing their overall smoking levels. Heavy smokers are not disappearing, however, and specially tailored programs are needed for them, more than for infrequent smokers.

Some Newer Approaches

Classroom drug education programs mostly have inconsistent results and often a lower impact than we desire. It is, therefore, necessary to look to a variety of different, more extensive prevention programs. Two new approaches which are being tried involve comprehensive guidelines for school drug-use issues and community-based programs which will be discussed in the next chapter.

Comprehensive guidelines for schools about drugs go beyond classroom education and deal with early intervention and disciplinary programs. Drugs represent an education problem in that students need information about them. For schools, they also represent a health problem in that some students develop serious drug problems. There may also be disciplinary problems, as students are breaking laws or being disruptive because of their drug use.

In order to implement these guidelines, the Addiction Research Foundation published *Alcohol and Drug Policies: A Guide for School Boards* (1988). It suggests ways of dealing with drugs as an educational, health and disciplinary problem. It also suggests that all schools develop and use a drug education curriculum, develop methods of early intervention for known drug users, and institute school policies concerning disciplinary action for students using drugs.

The curriculum should begin at the primary level and extend to the end of the secondary level. It is recommended that it might be integrated into a variety of subject areas, e.g., health, history, science. Staff time is needed to develop the course, and teacher training is needed to acquaint teachers with the program. In many cases, schools can use or adapt existing programs and very few will develop their own completely.

The goal of early intervention is to identify students who are using drugs at an early stage and give them the help they need. Students with drug problems may volunteer for help themselves or school staff may encourage them to seek help. For minor problems, brief counselling may be all that is needed. Each school should have a counsellor experienced in dealing with drug referrals, preferrably someone who is liked and trusted by students, as well as being specially trained in dealing with drug problems. If a student has a chronic or a serious drug problem, the counsellor should refer him or her to local addiction treatment services. In order to have the early intervention program work, each school must find or train a counsellor and give the

school staff an orientation to the work of the counsellors. Students also have to be aware of the counsellors and be willing to use them.

The disciplinary policies are necessary because students may be caught possessing, selling or using drugs on school property or at school-sponsored events. In this policy, the school board defines what constitutes a specific infraction regarding alcohol, tobacco and other drugs, and must determine what the penalty will be for the first and later infractions. Usually, for a first infraction the drug is confiscated and the student is told that he or she is violating school policy. The consequences of a second infraction are explained, and the infraction is entered on the student's school record. The school also notifies parents or guardians and would probably ask to discuss the problem with them. If there is a second or later violation, the same steps are taken as with the first. However, the student may be suspended from school for a few days. On later infractions, the length of the suspension period may be lengthened. Repeated violations ınay result in the student being expelled. However, in practice this is difficult to do and the student usually just goes to another school. In the case of repeated violations, there is clearly a need for early intervention and perhaps treatment as well. If students are intoxicated or under drug effects on school property, staff must prevent physical harm to the affected student and to other students as well. Staff must be sure that students get home safely under these conditions. It is very important that whatever policies the school establishes be well known to the students and their parents. They must be told that the school authorities view drug use as an important problem, that policies and guidelines have been established and that they will be enforced. Of course, it is counterproductive to have tough policies but inconsistent enforcement. More schools are accepting these guidelines now since they were first introduced in 1988. It takes four to six months for boards to develop guidelines and make them known to students. An evaluation project is under way to determine how many schools have used them, what the experiences of these schools

have been, and whether the guidelines have had any impact on drug use in schools (Gliksman et al., 1992). The preliminary results show that Grade 9 and 11 students in schools which introduced these programs had lower rates of heavy drinking afterward than those in schools which did not. Results were not so positive for Grades 7 and 13 but the programs are relatively new.

An interesting program called "Safe Grad" has been devised in Saskatchewan to cope with the large number of alcohol-related deaths accompanying the parties after high school graduations (Kleisinger, 1984). This phenomenon seems to be a substantial problem in Saskatchewan and Alberta, where large unsupervised parties are often held in rural areas. "Safe Grad" puts on seminars for selected students from many boards of education. They get training in how to run a safe graduation program in their school, and the seminar ends with an alcohol-free "safe grad" party. Student organizers are advised to provide lots of food and non-alcoholic drinks and to make sure buses and taxis are available for those who have too much to drink. Some evidence shows that alcohol-related accidents have been reduced following "Safe Grad," but the series is short (five years) and control conditions with no program have not been used.

Several other programs are too new to evaluate. For example, a new teacher training program for alcohol and drugs has been created in Ontario (Addiction Research Foundation, 1992). This program involves workshops for teachers, source books, an action planner and a trainer's guide. In addition, Health and Welfare Canada and the Addiction Research Foundation have a new *Youth & Drugs* package that trains professionals in recognizing and counselling early-stage drug users. Both of these programs and many others could be useful to schools and eventually contribute to declining drug problems.

A much broader approach to alcohol and drug education is being tried in several areas in Canada. This method makes education about drugs part of a "comprehensive

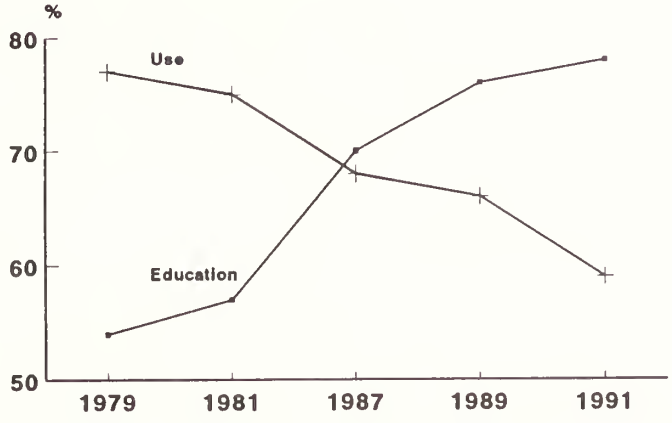
school health education" approach (WHO, 1992), in which health is viewed holistically, not as a set of concerns around specific diseases or problems. It draws on all educational opportunities to provide health, and draws upon services both inside and outside the school. It also strives to harmonize health messages from various sources influencing students such as media, advertising, the community, families, peers and schools. Lastly, it empowers youth to act to improve their own health and conditions supporting their health status. A trial of this approach is under way in Dartmouth, Nova Scotia, but results of the trial will not be available for some time. This more comprehensive health approach may well be effective in the future. In some cases alcohol and drug problems will be a focus of the approach, and in some cases not, hence the effects on such problems may vary from one program to another. The Dartmouth program, for example, is not focused on alcohol and drug use, hence any general effects may not lead to lower alcohol and drug problems.

Summary

It appears that school drug education is still important and a necessary approach. However, current methods leave much to be desired. Outcomes are inconsistent and often disappointing. Future school-based programs will move well beyond class lessons on alcohol and drugs and will focus on school policies on drug use, early intervention and disciplinary actions, while still retaining classroom education.

Figure 4
Drug Education*vs. Drug Use
Total Sample, 1979-1991

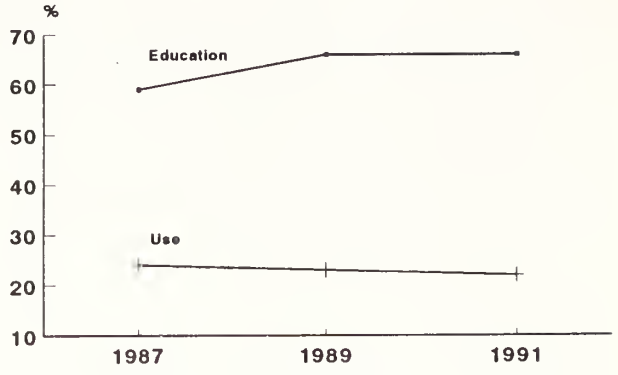
Alcohol Education vs. Alcohol Use
Total Sample, 1979-1991



	1979	1981	1987	1989	1991
Education	54	57	70	76	78
Use	77	75	68	66	59

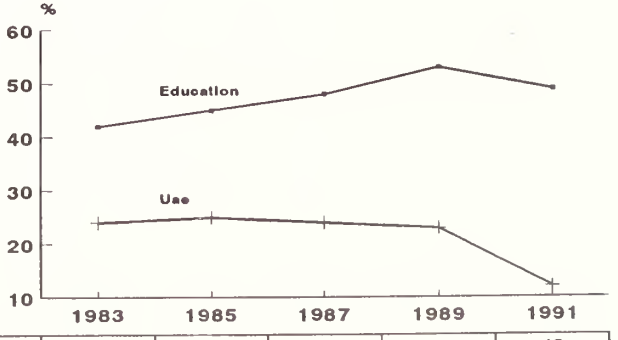
* percentage reporting one or more classes on subject during the previous school year

Tobacco Education vs. Tobacco Use
Total Sample, 1987-1991



	1987	1989	1991
Education	59	66	66
Use	24	23	22

Cannabis Education vs. Cannabis Use
Total Sample, 1983-1991



	1983	1985	1987	1989	1991
Education	42	45	48	53	49
Use	24	25	24	23	12

Table 23

Percentage of Students Reporting Various Behaviors Related to Reducing Drug Use

	%
Wish They Could Drink Less	4.7
Wish They Could Use Less Drugs	3.0
Tried to Quit Smoking (Past 12 Months)	16.1
Difficult or Fairly Difficult to Quit Smoking	51.6

Table 24

How Stressful Do Students Feel About Various Areas; Percentage Reporting

	Not At All/Not Very	Fairly/Very
Their Life	50.0	50.0
Relationship with Teachers	84.1	15.9
Relationship with Parents	69.0	31.0
Family Problems	66.4	33.6
School Rules	78.8	21.2
Homework	52.1	47.9

Table 25

Percentage of Students Reporting Alcohol, Tobacco and Drug Education in the Past Year in Ontario

	0	1 - 2	3 - 4	5 - 6	7+
Classes in Alcohol	21.6	48.1	16.9	5.8	7.6
Classes in Cannabis	50.6	36.6	7.8	2.3	2.7
Classes in Tobacco	33.7	45.3	11.7	4.3	5.1
Classes on Other Drugs	36.0	42.8	10.5	4.8	6.0

Chapter 7

Alcohol, Drugs, Smoking and the Mass Media

We have a long tradition of using the mass media to influence alcohol and drug use in Canada. Several temperance organizations in the 19th century had their own publishing houses for preparing books, pamphlets and other materials. The Women's Christian Temperance Union (WCTU) had its own newspaper and sponsored student contests and special prize events. All temperance organizations seem to have published pamphlets and many took advertisements in newspapers to tell people about their programs.

Of course, we are aware of the use of radio and television by those who sell alcohol and other legal drugs. Cigarettes were heavily advertised in all mass media in Canada until the 1960s and the ban on electronic media advertising was one of the first solid steps against smoking. Currently, much controversy exists about banning alcohol advertising. We are also aware of certain anti-drug messages on television. This chapter looks at the influence of the mass media, its effects on drinkers and drug users and the types of programs promoting both more use and less use of drugs.

Many recent programs seem to assume that mass media can have major effects on alcohol and drug use. The ubiquity of the mass media and the heavy exposure we all have to it seem to promise a major impact. We should remember, however, that alcohol and drug use are complicated behaviors, subject to many personal, social and family influences. In general, research has shown that the mass media are best used in supporting and affirming existing attitudes and behaviors (Wallach, 1981; Moskowitz, 1989). They are not usually successful in changing attitudes or behaviors. The changes in individual behavior that have been influenced by mass media, e.g., seat

belt use, personal fitness programs, are very small (Wallach, 1981) and specific to certain behaviors.

Most mass media campaigns about drugs can be expected to change only information levels or to affect attitudes to a small degree. For example, mass campaigns are useful in telling people about new laws, e.g., the .08 drinking-driving law, or the 12-hour licence suspension. Without such campaigns, many of us would not learn about new laws. No matter how much change in attitudes is created by the media, we know that those attitudes will not necessarily translate into changed behavior. We know that many heavy drinkers are against heavy drinking and that some cannabis users think it is harmful to their health. Several studies have shown that drug users have more information about drugs than non-users. Presumably they think the risks are worth the pleasure in doing drugs. We should not have too much faith that mass media can affect drug use in a major way. However, it is necessary to examine these programs and the more subtle influences through advertising and program content.

Mass media campaigns do have one important function. They get issues before the public and establish that they are important. If events around drug and alcohol abuse are frequently published in papers or TV news broadcasts, they get on the social agenda. In Canada, a good example has been the "drug epidemic" or "cocaine/crack epidemic" of the past few years. Numerous news and special programs have mentioned such epidemics (Cheung et al., 1991), although interest seems to be flagging of late. If a topic is on the social agenda, politicians and programmers pay attention to it and are more likely to establish new programs in the area. Probably only a few items can be on the agenda at one time and as new ones come, others must leave. Currently the major items on the Canadian social agenda seem to be unemployment, health care, the constitution and maybe, but well down the list, the drug epidemic.

Media Portrayals of Drinking

Many people believe that the way alcohol consumption is portrayed in the media affects people's drinking. This is particularly the case for children, who are heavily exposed to television advertising and are assumed to be especially vulnerable. Surprisingly, Almasdottir and Bush (1992) estimated that children in the U.S. have watched 22,000 hours of television by high school and each year have seen 1,139 drug commercials. Of course, they have seen far more alcohol commercials, but no estimate was given for these. Atkin and Block's studies (1981; 1983; 1984) did show that those young people who watched more TV were more likely to drink and they concluded that "advertising does lead to somewhat more favorable attitudes toward alcohol and drinking." Also De Foe and Breed (1980), who studied drinking in TV program content, stated that television "tends to normalize drinking and give it a kind of cultural stamp of approval." Others have claimed (Strickland, 1983; 1984) that no causal connection has been shown, only that drinkers watch more television. A few studies have been made of how alcohol is portrayed in Canadian mass media and only one about how young people interpret those portrayals.

Cafiso et al. (1992) studied the portrayal of alcoholic and non-alcoholic beverages in almost 300 hours of programs aired by three American stations. They found that there were 2.69 "events" (both program appearances and advertisements) per hour for non-alcoholic beverages and 2.11 for alcoholic beverages. If children have watched 22,000 TV hours, that makes about 46,420 alcohol commercials and program appearances by high school. Of course, alcohol events were more common in the evening hours and in adult rather than children's programming. No clear reason was given for most alcohol drinking events (58%) but stress relief (26%) or celebration (11%) were the next most common reasons. Alcohol was more often depicted in programs than in commercials. Although the study does not tell how

alcohol events affected young viewers, it is clear that there is heavy prime-time exposure to alcohol and that most of it is to non-problem drinking.

Health and Welfare Canada (1988) reported an interesting study of TV alcohol advertising all across Canada. This study involved 1,984 hours of broadcast time and 31 stations throughout Canada. There were 1.6 alcohol advertisements per hour, with 2.5 per hour in Ontario, twice as many as in Saskatchewan and Quebec and three times as many as in Newfoundland and Manitoba. Children under 12 saw about five alcohol ads per week, teenagers about seven and males 18-34 about nine. Ads seemed to focus on young white males. Women, minorities and older people rarely appeared except in the background. Surprisingly, the study also found that 20-40% of ads, depending on interpretation, were not in keeping with the Canadian Radio and Television Commission (CRTC) rules about advertising alcohol. The chief ways in which the code was broken were in the use of celebrities (e.g., former hockey stars), the use of youth symbols (children's toys, bicycles, skate boards, etc.), and in depicting activities of skill and daring (e.g., riding bicycles, playing racquet ball). Most ads had themes of "relax," "let go," "good times, good friends," humor, friendship with women, or male bonding. We can hardly expect alcohol ads to depict anything negative about drinking, but they could adhere to the CRTC rules. Also, many people find the themes in alcohol ads overly youth-oriented, even adolescent, and depicting a type of reward for drinking that you are unlikely to get just from drinking in the real world.

A later Health and Welfare study (1990) examined how much alcohol advertising is noticed by young people, what impressions they get and how they are influenced. People aged 15-21 were interviewed in four Canadian cities. Most were drinkers, even though many were under age, and 22% had consumed five or more drinks on a single occasion in the past year. Respondents watched 22 hours of television per week and saw about five alcohol commercials. As expected, they viewed characters in ads as

young, attractive, fun-loving and popular. However, they saw the commercial characters as placing more emphasis on alcohol than they did themselves. Respondents received messages about specific brands but also took away the perception that alcohol in a generic sense is associated with "a good time" and fun. Alcohol commercials seem to be targeted to young people (18-25), as the age of characters, the settings and events all appeal to them. However, young people are aware of that and mostly maintain cautious attitudes about drinking.

It is unfortunate that we have no research in Canada on portrayals of drug use in mass media. Some movies and dramatic programs depict cannabis and cocaine use very explicitly and in a very positive light (e.g., cannabis in "Easy Rider," cocaine in "Atlantic City" or "Manhattan"). Also, several celebrities on prominent talk shows have spoken positively about their drug abuse, along the lines of "it was great fun but it's all over now." We also have a pill for every ill on television. We all know about the many commercials for over-the-counter drugs such as painkillers, sedatives, pick-me-ups, diet pills and the like. It is difficult to believe that these drug events on television do not have some effect at least on the attitudes and behaviors of Canadians. However, no real research seems to be available on drugs other than alcohol in Canadian media.

Alcohol Advertising and Young People

Many people object to alcohol advertising and for a variety of good reasons. We have seen that 20-40% of the television ads probably violate the CRTC guidelines. Parents object because the ads seem to portray young people having a good (too good) time with drinking. Ads don't show any of the bad effects of drinking. Others object to the values portrayed, e.g., if you drink a particular kind of beer, women will flock to you. Some people believe that alcohol ads are just in poor taste and that there are too many of them. Most people, in Ontario at least, do not want more alcohol advertising

(Room, 1992). Many probably think that alcohol advertising promotes overall consumption, especially by young people, and they are against it for that reason. Much research has been done in Canada on the effects of alcohol advertising and it is worth reviewing here.

Several overall research reviews have been made on alcohol advertising (Mosher and Wallach, 1981; Smart, 1988; American Medical Association, 1986; Blane and Hewitt, 1980), but not all come to the same conclusion. Some of the available reviews report data on only one side of the issue.

There are some good reasons for arguing that alcohol advertising should affect overall consumption. The alcohol beverage industry is a major advertiser with expenditures of more than $1 billion in the U.S. and $150 million in Canada. Both adults and children spend two to four hours a day watching television, the favored medium for beer advertisements. Also, the marketing of alcoholic beverages seems aimed at specific new segments of the market such as youth, women and blacks. Although beverage manufacturers claim that they wish only to increase their share of the market, total profits will increase if the market expands and shares remain the same.

Some information suggests that alcohol advertising should have little impact on overall alcohol consumption. Although people watch television often, they frequently pay little attention to it. Many viewers leave the room during advertisements and about 25% of viewers use remote controls to switch channels when advertisements appear. In addition, much research indicates that mass media are not overwhelmingly effective in modifying attitudes or behavior; at best they reinforce existing patterns and beliefs. Finally, the U.S.S.R. did not have alcohol advertisements for generations but did have a high level of consumption until its government acted to limit supplies.

Advertising may have cumulative lifetime effects that are difficult to detect. While the influence of a few advertisements is likely to be insignificant, how can we assess

the impact of thousands of advertisements over decades on the drinking of individuals or on societal values? Longitudinal studies of a lifetime of exposure to alcohol advertising have not been made and probably never will be. For ethical reasons it would not be fair to expose some young people to alcohol ads over a long time (lifetime) while others got none at all, just to see whether a heavy dose of alcohol ads made people drink more.

Although alcohol advertising is usually targeted at a specific group such as youth, women or heavy consumers, research rarely takes this into account. Exposure to alcohol advertising varies greatly; children and the elderly watch more television than do middle-aged adults and probably see more beer and wine advertisements. Usually econometric research includes all drinkers and is not focused on advertisers' target groups or those most exposed to advertisements.

Advertising Bans and Restrictions on Advertising

Alcohol advertising bans have been imposed in some provinces, and a few studies have been made of their effects. Given the global nature of mass media, total advertising bans are almost impossible to achieve. An additional problem is that advertising effects may persist for a long time after a ban has been imposed and hence effects on sales may be long delayed. Perhaps an entirely new generation never exposed to alcohol advertising would drink less than those exposed to advertising for years and then a ban.

The first advertising ban studied occurred in British Columbia in 1971 and 1972 (Smart and Cutler, 1976), where local advertising of all alcoholic beverages was prohibited for 14 months. This ban had no effect on beer, wine or spirits consumption or overall alcohol consumption. Unfortunately, the ban was far from perfect. As well as being of short duration, there was no sophisticated education program to explain the ban and it did not have the acceptance of the general public

or the mass media. A large tobacco and alcohol lobby arose, and tried to persuade the general public and courts that the bans were illegal, unnecessary and even unconstitutional. Also, since alcohol advertisements were still running in the national and international media, the ban was only partially successful and little effect on alcohol consumption should have been expected.

A few years later Manitoba banned all beer advertising; this too was a partial ban in that out-of-province advertising could not be prevented. A time-series analysis (Ogborne and Smart, 1980) showed no change in consumption in Manitoba compared to Alberta, the control province. In fact, beer consumption increased significantly in both provinces after the ban.

Recently, Makowsky and Whitehead (1992) reported on the lifting of a 58-year ban on advertising alcoholic beverages in Saskatchewan. They found that beer sales increased and sales of spirits decreased, but there was no effect on wine, nor on the overall level of consumption. Of course, alcohol advertising is restricted in all areas in North America — liquor advertising is not allowed on television. Beer and wine are not directly advertised to children via TV (no beer advertisements on Sesame Street), and alcohol cannot be marketed as a problem solver. If the rules were more liberal the impact of advertisements on sales might be larger and hence bans might have greater effect. Currently advertising bans do not seem to affect overall consumption, and although they may affect specific segments of the drinking population, such as those most exposed to television, or heavier drinkers, no studies have examined this possibility.

Econometric Studies and Advertising

Most econometric studies indicate that alcohol advertising expenditures have no effect on total alcohol sales or those of individual beverage classes (Smart and Radigan, 1988). A few econometric studies do show a minimal correlation of some types of

advertising with alcohol sales. However, several studies indicate that increased sales lead to increased advertising and not vice versa.

A complex study by Bourgeois and Barnes (1979) examined the effects of a variety of control measures (price, number of liquor stores, minimum drinking age) and alcohol advertising expenditures in provinces in Canada. Unfortunately only regional, not provincial, data were available on advertising expenditures. Surprisingly, neither price nor advertising expenditure were important predictors of total consumption. A positive relationship was found between the level of print advertising and beer consumption, but it was negative for spirits. These anomalous findings may be related to the methods of analysis and problems in obtaining provincial advertising sales.

Most econometric studies examine data only up to 1975, that is, periods when alcohol consumption was increasing. However, Simpson et al. (1985) showed that total alcohol consumption stabilized in the late 1970s at around 11.1 litres per capita, after a long period of increases. During the same period, expenditures on alcohol advertising doubled. Smart (1987) studied the reasons for the stabilization and slight decrease (3%) in alcohol consumption in Ontario in the period 1974-83. A multivariate analysis using economic, demographic and control variables indicated that advertising expenditures were not related to decreased consumption. In fact, advertising expenditure had gone up remarkably (about 400%) while consumption had slightly decreased.

Experimental Studies of Alcohol Advertising

Several studies using experimental approaches to alcohol advertising methods have been done at the Addiction Research Foundation. The first of these (Kohn et al., 1984) investigated the effects of two kinds of print alcohol advertising: "lifestyle," and "tombstone" or product advertising. Subjects were male passers-by in a

shopping mall who viewed five print advertisements, either "lifestyle" or "non-lifestyle," for an imported beer. Control subjects were asked questions about the shopping mall and did not view advertisements. We selected respondents aged about 19-45 who could use on the same day the five-dollar restaurant voucher given for participating. We gathered data from the restaurant on the alcoholic beverages ordered and some six to 12 weeks later made a telephone survey of participants. There was no evidence that exposure to either form of advertising increased consumption, either in the restaurant or at the time of the survey. This study was presented as a market survey and subjects seemed to accept it as that. However, some aspects were less than ideal. The Ethics Committee of the Addiction Research Foundation required that the voucher be used only for food, not alcohol. This may have minimized the effect of the advertisements, but about 39% of subjects did drink alcohol in the restaurant.

Two studies examined the effects of television advertising of alcohol on consumption in party situations for students. In the first, (Kohn and Smart, 1984) male university students were exposed to beer advertising while able to drink. Subjects who volunteered for a social experiment watched indoor soccer matches and filled out a questionnaire in a party situation. They watched televised matches that contained either no beer commercials, or four or nine commercials at the rate of about three per half-hour. Beer, non-alcoholic beverages and snack foods were available during the sessions, each of which involved four to six students, and consumption by individuals was monitored. Over the course of the experiment the amount of advertising had no effect on beer consumption, although there were suggestions of short-term effects.

Suspiciousness on the part of subjects was important in the next study of alcohol advertising done by Kohn and Smart (1987). It involved women college students who viewed videotapes with or without wine commercials in the same party situation as for the male beer study. Subjects in groups of four to six viewed a soap opera, a popular

music program and a beauty contest containing zero, three, or nine commercials for wine.

A few subjects suspected that the study was not as presented. Most thought it was about reactions to commercials generally or about group interaction and conformity. Women shown nine commercials drank more wine than those shown three. However, there was no significant between those shown no commercials and those shown three or nine. These results, however, changed when the "suspicious" women were dropped from the analysis. Given these results it is unfortunate that there were no "suspiciousness" estimates for the male beer study. There is a need for more studies that take into account a variety of personality variables such as persuasibility and suspiciousness.

The last experimental study (Sobell et al., 1987) involved alcohol content in both programming and advertising. Male college students were asked to volunteer for experiments with prime-time television programs and taste tests of light beer. They viewed either of two video tapes of a "Dallas" segment doctored to include: (i) four alcohol advertisements and either 14 drinking scenes in the program content or no drinking scenes; (ii) alcohol advertisements only; (iii) alcohol scenes and no alcohol advertisements; (iv) a control condition for the various combinations of no alcohol scenes and non-alcoholic beverage or food advertisements. Subjects performed a taste test for light beer and the amount consumed was measured. Neither the drinking scenes nor alcohol advertisements had any effect on the amount of beer consumed. As with most experimental advertising studies, this study was not ideal. There was no party situation, subjects were tested individually and there was no real test for suspiciousness.

In summary, several experimental econometric studies have examined the short-term effects of alcohol advertisements and others have looked at advertising bans in Canada. None of these studies is ideal methodologically, but none of them shows

alcohol advertising having much impact. Current research suggests that advertising is, at best, a weak variable affecting human drinking. Those interested in effective alcohol controls would spend their time better controlling prices and availability than controlling advertising (Bruun et al., 1975; Ornstein and Hanssens, 1985).

Despite the relatively weak influence of alcohol advertising on consumption, it is still an issue people feel strongly about. For example, the Canadian distillers have petitioned the CRTC to allow the advertising of distilled spirits on television. Their basic arguments are that by disallowing distilled spirits the CRTC infringes their rights under the Canadian Charter of Rights and Freedoms. However, many health-related organizations spoke against this view on the grounds that it would contribute to more alcohol consumption and more problems. The Addiction Research Foundation argued that alcohol advertising is not in the public health interest, does not offer opportunities for informed choice, and runs the risk of increasing problems from drinking. The Foundation recommended that all alcohol advertising be banned on television, even that for beer and wine. At present the issue has not been resolved, and it may be decided more on legal rights and fairness grounds than from public health concerns.

Anti-Alcohol and Anti-Drug Campaigns

Many evaluations have been made of anti-alcohol and -drug campaigns in Canada. For example, there are evaluations of many drinking-driving campaigns such as the 12-hour licence suspension (Vingilis et al., 1988), random stopping programs (Vingilis et al., 1980), and of public information campaigns about alcohol risks and driving (Farmer, 1975; Huebert, 1990). However, most of these programs were not directed at young people specifically. Some young people would be affected, but most drinking drivers are not young people. Unfortunately, only a few mass media programs for Canadian young people have been evaluated.

One of the largest programs for the prevention of substance abuse by young people was mounted by the Alberta Alcohol and Drug Commission. Fortunately, several evaluations have been made. The campaigns extended over about 10 years, and a variety of survey results are available. The program included television, radio and print messages encouraging youth to avoid drug use and encouraging safe alcohol use. There was also a free magazine, *Zoot Capri,* which featured articles and themes for young people, cautioning against drug use of all types. The evaluations showed that the campaign was recognized and recalled by most teens and parents. Many reported that elements of the campaign helped them avoid pressures to use drugs. Alcohol use declined in Alberta during the early part of the program, but later evaluations showed that although alcohol use continued to decline, it declined even more in Manitoba, which did not have the program. Some data also indicated that Alberta teenagers were drinking at earlier ages than in Manitoba. Perhaps the AADAC program was introduced at a time when both alcohol and drug use were declining generally in Canada. Certainly there were declines in alcohol and drug use throughout the 1980s in Ontario. When no comparison was made with another province, the campaign appeared to have a much greater impact than it really did.

Another important mass media persuasion effort was launched by Health and Welfare Canada. There were three campaigns: "Really Me" (discouraging drug use), "Play It Smart" (discouraging drinking-driving) and "Break Free" (reducing tobacco use). The "Really Me" campaign involved several television commercials, print ads, posters and The National Drug Test — a 60-minute TV program. Most Canadian youth were aware of the campaign, were interested in the ads and found them believable. By the end of the campaign somewhat more parents reported conversations with children about drugs.

The "Play It Smart" campaign involved similar activities but was less intensive. Close to 90% of those young people surveyed were aware of the campaign and a

majority recalled the slogan. About 75% of young people said they would think about drinking and driving and about 25% said they would talk to their friends about it.

The "Break Free" campaign promoted the benefits of not smoking and tried to establish that not smoking is the norm. As with the other campaigns most Canadian young people seem to have seen the ads and found them believable, although few would talk to their friends about smoking as a result of the campaign. During the campaign, smoking rates for young people also fell.

Smoking and Advertising

Issues around the advertising of tobacco products are no longer very interesting, since advertising was banned in 1988. Tobacco advertising is unlikely to return to Canada, except via magazines from foreign countries. As in the case of alcohol, it is uncertain whether the bans have had much effect. One reason is that the 1963 ban on TV advertising was followed by many other restrictions as well as large increases in price. The independent effect of a ban is difficult to discern. Langesen and Meads (1991) made a study of advertising restrictions in 22 countries including Canada. They were unable to conclude that advertising restrictions from 1960 to 1971 had reduced tobacco consumption. In fact consumption went up, probably because of new promotions and sponsorship. In more recent years they did find that "consumption falls as advertising restrictions increase," but increasing prices were a much stronger factor in decreasing sales.

Whether the total restriction of media advertising for tobacco had much impact in 1988 has also been a topic for debate. Sales fell afterwards, but real prices also rose rapidly and how much to attribute to each change has been argued (Langesen, 1992; Stewart, 1993). Since tobacco advertising is no longer permitted in Canada, getting the right answer matters less now.

None of the media campaigns described above showed any clear impact on drug taking, be it alcohol, tobacco or other drugs. However, all show that campaigns "work" if knowledge of the programs and attitude change are the criteria. All of these programs were very expensive and were introduced in the 1980s when alcohol and drug use were falling. They could all demonstrate that alcohol and drug use were lower after than before the programs began. As in other countries, research in Canada shows that mass media campaigns about drugs provide young people with information and may change attitudes. However, we have not yet seen programs that directly affect individual decisions about whether to drink or use drugs. It is probable that mass media programs have a different purpose. They give people and politicians the impression that something important is happening. They raise our awareness of drug issues and they provide the ground for the development of more intensive prevention and treatment programs.

Chapter 8

Treatment and Self-Help Programs for Youth

The Need for Treatment

Every modern country, including Canada, offers treatment to young drug abusers and alcoholics. How treatment is given varies greatly from one province to another within Canada, as does its availability. Because health facilities are largely provincial matters, there is no national treatment system and no national data collection system for people in drug abuse treatment.

Treatment refers to any organized efforts to provide professional or non-professional help for individuals to limit the effects of drug use or abuse in their lives. Treatment is offered for humanitarian reasons — to alleviate the suffering of drug-dependent people, and also because it contributes to prevention. Drug abuse of all sorts has an epidemic or contagious nature and spreads from one person or group to another. We know, for example, that alcohol and drug abuse runs in families and follows peer and friendship patterns. The fewer users there are, the less likely it is that new cases will develop. Research has shown (Hughes and Crawford, 1972) that identifying and treating drug abusers can limit the spread of drug abuse by cutting down on the number of street-level drug sellers. Getting drug abusers into successful treatment programs is important in preventing the expansion of drug abuse epidemics or waves. This is less a feature of alcohol treatment, as alcohol is readily available and not sold primarily by alcoholics. However, early identification and treatment of both alcohol and drug abusers allow cases to be treated before full-blown addiction develops. Even the treatment of late-stage cases can prevent the development of some social, economic or family problems, or limit their duration. Treatment under the best

circumstances has an important role in the secondary and primary prevention of drug abuse.

Many young drug abusers receive help and advice from their friends and relatives or clergymen, and we know little about how much they get or how helpful it is. Others join self-help groups such as Alateen, Al-Anon and others. For our purposes we will not call these informal or self-help activities treatment, but confine that term to the efforts of individuals, clinics, hospitals and centres whose specific job it is to provide help. The efforts may be through an agency specifically established to treat drug abuse or one with a wider mandate, such as a general or a psychiatric hospital. Probably at some time virtually all health professionals and agencies provide treatment for young drug abusers. The purposes of this chapter are to examine the types of treatment facilities in Canada, the characteristics of those who use them, trends in the provision of treatment, the effectiveness of treatment as now given and what is needed by way of new facilities.

Young drug abusers may require a large variety of treatment interventions. Some need only advice or consultation about how to deal with various drug problems of a minor nature. This may be professional advice on sterile injection practices or advice from drop-in centres on legal, social or employment problems. Others need extensive psychiatric or medical interventions. Broadly defined, treatment includes help in dealing with:

(i) emergency medical conditions resulting from the toxic effects of drugs or the method of administration, such as stupor, shock, delirium or convulsions;

(ii) psychiatric conditions resulting from adverse reactions, such as fear, panic or paranoia;

(iii) medical complications resulting from prolonged drug use, such as hepatitis, abscesses or thrombosis;

(iv) prolonged psychiatric complications, such as psychosis, paranoia, depression or flashbacks to earlier drug experiences;

(v) severe withdrawal symptoms such as aches, pains, convulsions or tremor;

(vi) the basic conditions of dependence, including drug craving, addiction, and tolerance;

(vii) the basic socio-psychological problems which provide the original motivation for addiction and the lifestyles which support it.

This list includes short-term palliative types of treatment, long-term medical and psychiatric treatment and a few (the last) which are oriented towards changing or curing the drug problem itself. We are most concerned with curative treatment here, as it seems the most difficult to provide and the least understood.

Treatment Facilities in Canada

For people seeking professional help in Canada there are many possibilities. They may get help from general health experts and facilities, such as general practitioners, public hospitals, through emergency wards or inpatient care, public health centres, public health nurses or occupational health centres. However, they may go to people or agencies with a special interest in addictions, such as psychiatrists, psychiatric treatment units, provincial alcoholism and drug treatment centres, or community-based treatment, detoxification or halfway-house facilities.

Specialized drug treatment programs see large numbers of alcohol and drug abusers in Canada. The following can be identified:

(i) Detoxification programs, providing inpatient care for up to seven days, chiefly for alcohol withdrawal, although drug users also use these facilities. Many provide referrals to long-term specialized treatment centres.

(ii) Residential programs of less than 31 days. These are often community- or hospital-based.

(iii) Residential programs of 31 days or more. These are rarely hospital-based. Many are halfway houses for alcoholics, others are therapeutic communities, chiefly for drug abusers.

(iv) Day-treatment programs. These are facilities offering structured treatment for four to eight hours or so per day, with no overnight accommodation. Patients attend for a pre-determined number of days and are usually expected to complete a set program.

(v) Outpatient programs. These are programs offering treatment on an individual or group basis for a few hours a week. Some programs are open-ended and others are for a specified duration or number of visits.

Curative treatment for alcohol and drug abusers takes many forms and there are many ways to describe it. One useful distinction is often made between drug-bound or pharmacological, and drug-free approaches. In pharmacological approaches, drugs such as Valium are given to aid in the withdrawal from addictive drugs and to help maintain the drug-free state. Maintenance approaches involve the use of narcotics, such as methadone, to substitute for the drug of addiction. Drug-free approaches are usually in therapeutic communities which provide a drug-free environment for addicts. Both types of approach may involve psychiatric and psycho-social support such as family or employment counselling, rehabilitation and the like. In Canada, the main types of treatment are methadone maintenance and therapeutic communities for narcotic addiction and a variety of hospital-based and community-based treatments for other types of addiction.

Methadone Programs

Methadone is a narcotic drug — a semi-synthetic opiate that can be given to narcotic addicts in oral form. It was first used by Dole et al. (1968) to treat "narcotic craving" and found to be extremely successful with American addicts. Early programs, including those in Canada, gave very large "blockage" doses (200 mg or more) and therapists expected that addicts would remain on them for ever. However, methadone was a highly addictive drug, and addicts had trouble withdrawing from large doses. Also, addicts often continued their use of other drugs such as alcohol, barbiturates and narcotics while on methadone and occasionally sold part of their methadone (Henry, 1974; Platt and Labate, 1976). Programs have now changed to involve lower methadone levels (50-100 mg) and to be short-term. Methadone programs are meant to be time-limited, and total withdrawal is expected within about six months. Clinic-based programs offer a variety of supportive psychiatric, rehabilitative and counselling services in addition to methadone — hence they involve both pharmacological and non-pharmacological elements.

Unlike the situation for most types of drug-abuse treatment, we do have national data on patients in methadone treatment. Although methadone maintenance programs take various forms, most cases are now treated in clinics or hospitals, but a few are still maintained by individual physicians. Only 681 Canadian addicts got methadone treatment in 1980, but by 1989, the last year for which we have data, there were 1,459. The large increase may be due to the opening of more programs, but we do not have good data for that. The majority of narcotic addicts receiving methadone are treated in British Columbia, with far fewer treated in Quebec, Ontario and Alberta; very few are treated in other provinces. Table 26 shows the number of methadone patients by age in Canada in 1988 and 1989. Only one person was under 18, and 13.2% were aged 18-29. More young females than males are getting methadone, which is surprising in view of the large number of male heroin users.

In 1986 the British Columbia government announced that it wished all methadone to be dispensed in clinics and that private physicians not be allowed to dispense it. However, the methadone regime in British Columbia has been criticized. Alexander et al. (1987) expressed the view that some patients should be treated by private physicians and that some of the methadone clinic rules are too restrictive or too vague. For example, the addicts are not eligible for treatment unless they have been on opiates for five years, but withdrawal is the ultimate goal, to be started whenever clinic staff decide. Patients must take counselling even if they don't want it and must have a responsible and socially stable lifestyle. Failure to follow these rules can lead to the termination of treatment. Alexander et al. (1987) also found no evidence that methadone prescribing by private physicians was harmful, more costly or more likely to lead to methadone becoming a street drug.

Therapeutic Communities

Therapeutic communities for drug abusers have a variety of characteristics that differentiate them from other programs (see Brook and Whitehead, 1980). Almost all are residential treatment centres established by former addicts and they rely largely on ex-addicts, especially their own graduates, for staffing. They are drug-free programs and usually expel residents for narcotics use. Most are rather strictly run with a heavy emphasis on conformity to rules and public punishment for transgressions. There is a strong emphasis on addicts accepting responsibility for their own behavior, which is often called "stupid" rather than "sick" as it would be in professionally run programs. Much of the therapeutic activity takes place in encounter groups, which stress honesty, direct confrontation and criticism of residents' behavior. Some therapeutic communities value and emphasize their non-professional management, and others involve professionals as both managers and consultants.

The earliest and perhaps best known therapeutic community for addicts was Synanon, founded by a former alcoholic in California. Synanon was aggressively anti-drug in orientation. It emphasized confrontation, attack therapy and work for all group members. A large number of Synanon-type groups were established in the United States, with similar groups in Canada and England, but none seem to be operating in Canada now. Other approaches, including "Boulder Bay," a wilderness camp in British Columbia and "Head and Hands," a Montreal rehabilitative centre based on psychotherapy, were established for heroin addicts. Typically, therapeutic community programs in Canada have been small, often isolated and inadequately financed. Frequently they cease operations after a few years without leaving any detailed description of their programs or data on their success rates. I have been unable to find any evaluations of Canadian therapeutic community programs published in the past 10 years, nor is there any information on how many people are treated in such places in Canada.

One of the fullest descriptions of a Canadian therapeutic community, although published more than 12 years ago, is still that of "414," a program designed for speed addicts in London, Ontario (Brook and Whitehead, 1980). It took only speed addicts, although many were multiple drug users. Unlike many therapeutic communities, the program had extensive involvement on the part of professional staff and management. The basic concepts entailed what Brook and Whitehead (1980) have called the "colloquialisms" of the therapeutic community movement. They are: "no cop-outs" (take responsibility for your behavior); "act as if" (act the way you think you should ideally, even if you don't feel prepared for it); "turn around" (defining your life goals in keeping with your beliefs); and "no free lunch" (requires people to do their share in the community). The 414 community was terminated in 1973, as the need for the service had decreased and sufficient information had been acquired on how such communities function.

Hospital-Based Treatment for Drug Dependence

It is difficult to determine just how many alcohol- or drug-dependent people of any age are treated in Canada, nor do we know what treatment they receive or much about their characteristics. Of course, treatment is typically given by many provincial or locally funded agencies which are not integrated or connected in any way. There is no national registry for drug-dependent people in treatment in Canada (except for methadone), or even any good way of keeping track of the numbers. However, there is information on people treated in hospitals and in methadone programs, so that a general idea about trends can be obtained. What is missing is information on the large numbers of people treated in community-based, non-hospital treatment centres.

People receiving hospital-based treatment for drug abuse probably get a variety of approaches. Most would involve physical, psychiatric and behavioral evaluation, with treatment for physical problems. Most seem to include inpatient care with group psychotherapy as well as outpatient and follow-up care.

There are several ways to examine the numbers of young people treated for alcohol and drug problems. If we are concerned with curative treatment, we should leave out poisonings and other acute conditions, as well as those who had primarily medical problems, such as cirrhosis. If we include only mental disorders, e.g., alcohol and drug dependence, psychoses and non-dependent abuse, the numbers are relatively small. In 1988 about 4,020 people aged 15 to 24 received help with mental disorders due to alcohol or drugs. About 20% to 30% were female, depending on the diagnosis. About 63% of those received help for alcohol problems. We say "help" because although they received some hospital-based treatment it is not clear how much was "curative," i.e., oriented towards ameliorating drug dependence. Some of it was probably treatment of acute symptoms from psychoses and drug overdoses. We should note, too, that the figure of 4,020 is in all likelihood an overestimate of the

true number, as people could have more than one admission and thus be counted twice or more.

It is interesting to note that there is about a 10% increase in the numbers of young people treated between 1980 and 1988 (3,633 to 4,020). Because of the decline in the youthful population, however, the rate went up from 78 to 100 per 100,000, a substantial increase. As the numbers of users and heavy users of drugs declined, that probably means that a larger proportion of young alcohol and drug abusers are being treated than in the past. One likely factor would be the increase in numbers of facilities for treatment. We know that it is the case in Ontario, where the number of programs went from 167 in 1979-80 to 217 in 1988-89 (Rush and Tyas, 1990).

As mentioned earlier, there are no national figures for people treated in community-based programs. Those figures are available for Ontario (Rush and Tyas, 1990), and here people treated in community-based programs are about 61% of the total. If the same ratio were applied at the national level, the probable number treated would be around 10,000, not the 4,020 we estimated above.

It is very difficult to find information for Canada as a whole about what type of treatment people received. Some data are available for Ontario, which has a regularly occurring survey of all types of agencies for treating alcohol and drug abuse (Rush and Tyas, 1990). It can be seen from Table 27 that those under 24 represent only 23% of the total treated and those under 18 only 5%. Young people (up to 24) represent 30% of those seen in assessment and referral and 38% of those getting non-residential or outpatient treatment. However, they are only 19% of those getting residential treatment and 13% of those getting detoxification. There may be some reluctance to mix younger people and older people in residential treatment, and there is often a shortage of specialized youth residential treatment.

Characteristics of Young People in Treatment

There are several sources of information about who enters addictions treatment, including hospital statistics and studies of selected patient populations. For example, the Working Group on Alcohol Statistics (1984) produced information on people treated in five provincial alcohol commissions in 1981-82. They found that 78.1% were males. Long-stay residential programs and detoxification programs consisted almost entirely of males (90%). Only outpatient programs had substantial numbers of females (32.5% of the total treated). About 10% of clients were younger than 20 in most types of facilities except detoxification centres, where only about 3% were under 20.

Considerable information is also available from hospital statistics and special studies on who comes into treatment. Young people coming into treatment are more likely to have a drug problem than an alcohol problem and are more likely to be male. The relative youthfulness of people in drug treatment can be seen in some of the hospital admissions data (Williams et al., 1992). For example, the median ages for people with drug psychoses and the drug dependence syndromes are 24 and 28. However, for alcohol psychoses and the alcohol dependence syndrome the median ages are 61 and 39.

Smart and Adlaf (1990) studied three groups coming for treatment at the Addiction Research Foundation in Toronto — those with cannabis, cocaine or alcohol as their first, most important problem. As expected, cannabis and cocaine abusers were mostly in their teens and twenties, but alcohol abusers were mostly in their thirties and forties. Cannabis abusers were the youngest group by far. Probably because of their age, fewer cannabis and cocaine abusers were married, divorced or separated. Also, more cannabis abusers were students and fewer were employed. Fewer cannabis users had been previously treated (30.9%), compared to cocaine abusers (37.3%) and alcohol abusers (49.9%). Often when young people come into

treatment it's for the first time. Most cannabis abusers (73%) had secondary problems with alcohol, cocaine or some other drug. However, only about 55% of cocaine and alcohol abusers have multiple drug problems.

We have also studied people coming to assessment and referral centres in Ontario (Smart, et al., 1990). These are centres that do behavioral assessments of alcohol and drug problems and try to get people into the best medical, behavioral or self-help types of treatment for their particular problems. This study too found that cocaine and cannabis abusers were much younger than alcohol abusers (median ages 25 and 23 vs. 35). Again, fewer were married, separated or divorced. Cocaine and cannabis abusers started their regular drug abuse earlier but their alcohol use later than did alcohol abusers. Cocaine abusers were much more likely to inject drugs and to be high-risk drinkers than were cannabis users. These two studies make it clear that young people coming into treatment tend to be multiple drug users. Cocaine users have more drug and alcohol problems and probably are a "hard-to-reach" group for treatment staff.

Trends in Drug Problems for People in Treatment

It is difficult to determine on a national basis what sorts of drugs are causing the most problems and generating the greatest treatment need. We have discussed the upward trends in methadone treatment, but other national trends are unknown. We have data on trends in primary drug problems for people seeking treatment at the Addiction Research Foundation. It is one of the largest treatment centres and usually treats about 4,000 people each year. Table 28 shows the trend in youthful admissions between 1985 and 1992. It can be seen that patients are less likely in 1992 to have alcohol, cannabis, tranquillizers or sedative-hypnotics as their primary problems. The 50% decline in cannabis problems is particularly striking and it mirrors the decline in cannabis use seen in the student population in Ontario. The major increases are in

cocaine and narcotic problems. In 1985, cocaine abusers represented only 13.9% of young people in treatment, but by 1992 they had increased 300% and now represent the largest single group. There is also a large increase in narcotic abusers, but their absolute numbers are still relatively small. There is no doubt that the "cocaine epidemic" can be seen in treatment statistics if not in studies of the general population. Cocaine and especially crack problems are a major treatment challenge for the 1990s.

Rush and Ogborne (1992) in their review of alcoholism treatment in Canada have also noted the decline in age and the increase in the proportion of females treated. Some of the latter is due to specific programs for females, but women seem to have better treatment access than in the past. The authors also note that there is a decline in services for skid row alcoholics and more focus on a socially stable clientele. They note, too, that provinces continue to emphasize voluntary treatment, except for Prince Edward Island, which alone has much mandatory treatment. Some alcoholics receive court-ordered treatment, especially in connection with drinking-driving offences, but most alcoholics go into treatment voluntarily.

Changes in Youth Treatment for Drug Abuse

Many changes have occurred in the types of treatment offered for young drug abusers, some of which have already been mentioned. Some are a result of changes in those seeking treatment and others are applications from new research and practice. In general, we can summarize the changes in youthful treatment in the past 10 years or so as follows:

(i) There are more alcohol and drug-dependent persons coming for all types of treatment, and the rate of treated cases per 100,000 has increased (Health and Welfare Canada, 1988).

(ii) There are indications that the percentage of females is increasing among treated cases and that the average age is decreasing (Smart and Adlaf, 1990; Rush and Ogborne, 1992).

(iii) Cases of cocaine and narcotic abuse requiring treatment have increased greatly, but cases involving alcohol, cannabis and tranquillizers are decreasing. There is essentially no change in cases involving hallucinogens or solvents (Smart and Adlaf, 1990).

(iv) It appears that a number of therapeutic community programs have disappeared or changed their clientele to include a wider range of problems than drug use.

(v) There is a trend away from hospital and inpatient programs to community-based and outpatient programs (Rush and Tyas, 1990).

What are the Most Effective Treatments for Youth?

As stated earlier, treatment is offered for humanitarian, preventive and curative reasons. Often, however, we forget the first two and focus on cures or effectiveness. Treatment for drug abuse is expected to "work" — to improve the drug-dependence picture, or at least delay its worsening. We now know that to expect a complete "cure" is unrealistic with many drug abusers. We must often be satisfied with some improvement in areas such as alcohol and drug use, employment, family relationships or criminality. The ideal treatment response occurs when the alcohol or drug addict returns to a mainly drug-free life, gains employment or continues in school, stops criminal behavior and improves his or her satisfaction in life. Of course, this ideal eludes many youth in treatment and most struggle with lesser achievements or total failure. Of those few actually evaluated, few drug abuse treatments are effective.

Research on treatment effectiveness is not often done in Canada, and many of the results obtained can be called disappointing at best. The best treatment studies involve

comparisons with untreated groups, so that we can say that the recovery rate was better than happens with no treatment at all. Next best would be to compare several kinds of treatment, so that the most effective or cheapest could be identified. For this we need reliable information on what patients were like before they had treatment and during some follow-up period after treatment has been completed — usually one or two years. Most drug treatment evaluations done in Canada and elsewhere do not meet these criteria. Often they offer no comparisons with untreated or treated groups, little pre-treatment information and inadequate follow-ups. The typical study is of a single facility with information only on how patients were when they left treatment. Follow-up is often limited to official records of readmission or criminal involvement.

Effectiveness of Methadone Treatment for Youth

Only when methadone treatment was developed did rates of improvement for addicts become at all respectable. Several early methadone studies in Canada (Williams et al., 1970; Smart et al., 1970) showed considerable improvements in employment as well as reductions in drug use and criminality. However, none of those studies show that patients getting methadone treatment have higher recovery rates than they might have achieved on their own or as a result of spontaneous recovery. These studies were not focused on youth, and several of them examine high-dose methadone trials which are no longer done. No published studies of methadone treatment for young people in Canada have been made in the past 10 years.

Effectiveness of Therapeutic Communities

In my book *Forbidden Highs,* published in 1983, I concluded that "Evidence about the effectiveness of most Canadian therapeutic communities for narcotics addicts seems to be lacking." Unfortunately, 10 years later this still seems to be true. Such communities usually had untrained staff and an anti-establishment orientation with an

abhorrence of "evaluation" or even record-keeping. This is unfortunate, for these communities represented a departure from the usual medical approach. They were also focused very much on the day-to-day issues of youth and their drug problems. The best therapeutic community evaluation in Canada is probably still the one done for 414 by Brook and Whitehead (1980).

This evaluation probably happened because 414 was established as an experimental program by the Addiction Research Foundation, whose main concern is research. The evaluation by Brook and Whitehead (1980) compared residents who stayed long periods at 414 with those who spent only a few hours or days. They found after an extensive follow-up that length of residence had no effect on residents' drug use, criminality, psychological or behavioral functioning. In short, the program does not seem to have been a success, except as a research project.

The follow-up study of Stonehenge residents is only the second evaluation of a therapeutic community to be undertaken in Canada (Holt, 1979). However, only 18 cases were involved out of a sample of 50. Those who participated in the follow-up seem to have made good adjustments in terms of employment and reducing their drug use and crime. However, those who did not participate probably had poorer records of recovery. Since therapeutic communities are few in number and no longer fashionable in Canada, further evaluations are not likely.

Effectiveness of Hospital- and Community-Based Treatment

There are several excellent reviews of treatment studies for youth (Wilkinson and Martin, 1992; O'Brien et al., 1988; Quinn et al., 1988), but most of the papers with outcome results are from the United States. There are very few experimental studies of treatment effectiveness with drug-dependent youth. Most evaluations are of one or two treatments where there is no real comparison, or only one type of treatment is examined. In reviewing this work, Wilkinson and Martin (1992) concluded that

"treatment duration and location per se are largely irrelevant to treatment outcome, whereas apparently subtle variations in treatment content can result in significant differences in treatment effectiveness." Unfortunately almost all of those studies reviewed are from the U.S. and only three are from Canada.

Some studies have shown that young alcoholics are less likely to improve in treatment than older alcoholics (Rathod et al., 1966; Glatt and Hills, 1968; Gwinner, 1977), as they begin their alcoholism at an earlier age and have few social supports. Only one Canadian study seems to have examined this possibility. I compared 40 alcoholics younger than 24 with 40 older alcoholics, both treated at seven clinics of the Addiction Research Foundation (Smart, 1979). It turned out that at intake younger alcoholics had lower social stability, poorer attitudes toward abstinence, less motivation for treatment and fewer personal and social resources. Younger alcoholics had shorter drinking careers and started drinking earlier but did not have more alcohol problems. Surprisingly, they had similar treatment experiences to older alcoholics, and in both groups about 65% were improved or much improved at a one-year follow-up stage. Perhaps young people have a greater resiliency which allows them to overcome the problems they bring to treatment.

Two Canadian studies have been made of young polydrug abusers in treatment (Wilkinson and LeBreton, 1986; Wilkinson and Martin, 1991) at the Addiction Research Foundation. The first of these studies involved 49 multiple drug users aged under 30 (mean age = 23). Most were male (82%), single (80%), unemployed (63%) and many were on probation, parole or awaiting their court cases (46%), hence most were not socially stable. Most patients were users of stimulants, but many were also heavy drinkers and users of cannabis, tranquillizers and sedatives. The treatment given included three training sessions, six follow-ups and optional sessions if requested. The main aims were to establish cognitive and behavioral self-control measures so that patients could reduce their alcohol and drug consumption. Specific goals were set for

reducing such use; patients were trained to avoid heavy using situations and to use self-help manuals. At the end of treatment, 11 were successful in terms of controlling their alcohol and drug use, 20 were significantly improved and 18 were unimproved. As might be expected, the successful group had lower levels of drug use at intake and fewer problems of all sorts. This study is one of very few that show much treatment success with polydrug users. However, the success of the study is limited in that there was no comparison with other types of treatment nor any comparison with untreated drug users of the same type.

Wilkinson and Martin (1991) did compare outcomes from residential and outpatient programs. They compared young polydrug-using patients in four- to six-week residential programs based on social learning theory with a three-session outpatient program, also based on social learning theory. In one residential program, access to reinforcers such as recreation would depend on how well the whole group did. Thus peer group pressures to do well were very strong. In the other residential group, reinforcers depended only on what the individual himself did. The brief outpatient intervention was similar to that in the Wilkinson and LeBreton study described above. It was found that the group reinforcement condition was best in terms of outcomes one year later. However, the other individual residential reinforcement and outpatient groups did not differ. This showed the importance of peer pressure on drug abusers. It also showed that intense high-cost residential treatment does not necessarily have a higher success rate than shorter, cheaper outpatient care.

One last study worth noting because of its unique features was reported by Dyer and Lind (1988) in Alberta. They described a prevention program, one of whose aims was to get more high-risk young drug abusers into treatment. The program used mass media, community programs and school support materials to influence high-risk youth and their parents. These approaches focused on developing "teen skills,

competence and control" and developing the desire of young people to delay drug use or reduce it once it had started. One important result was that after the program, more teenagers entered detoxification, inpatient and outpatient programs. Because no comparision was made with any province without a prevention program, it is difficult to be sure whether the program itself was crucial. However, the study is the only one in Canada examining whether prevention programs might increase treatment usage by young people.

Community-Based Treatment

There are many community-based treatment facilities for young people with drug abuse problems. Some are outpatient, residential, halfway-house, or day-care facilities specifically for alcohol and drug abusers. Others are community health agencies, child welfare services, social or family agencies, or youth services that provide some counselling or therapy for young drug abusers. Probably few have programs exclusively for young drug abusers but integrate them into general social or health services for troubled young people. We don't have any good national estimates of how many such services exist, nor do we have any estimates of how successful these services might be with young drug abusers. I have been unable to find any published study of the drug treatment programs for youth in community-based facilities.

The lack of information on agency success with young people became a significant problem with the advent of the Ontario Drug Secretariat, an agency whose aim was to reduce drug problems among young people in Ontario. The Secretariat made funds available for a large follow-up study planned by Alan Ogborne at the Addiction Research Foundation. This study will eventually involve about 2,300 people in 23 agencies that provide alcohol and drug treatment to young people. Of those agencies, 13 seem to be devoted exclusively to young people below the age of 25. They provide a range of services including outpatient and residential care, group

and individual counselling, and mental health services. The follow-up study has begun but no results are available yet. However, this study promises to give information on who goes into treatment, what treatment they get and information on the immediate outcomes of treatment such as drop-out rates and lengths of stay. Some follow-up information will also be available, but many of the patients have not completed the follow-up interview.

Compulsory Treatment

Many countries have compulsory treatment for addicts, including Malaysia, Singapore and Hong Kong. For many years alcoholics could be forced into treatment in Switzerland, but the laws were revised a few years ago. In Canada there has been some interest in compulsory treatment programs but that seems to have waned lately. Prince Edward Island does have compulsory treatment on the books, but it is not used very often. The 1961 Narcotic Control Act (see Chapter 11) had provisions for compulsory treatment but they were never promulgated. In the 1970s, British Columbia petitioned the federal government to bring these provisions into force, but there have been civil rights challenges, and compulsory treatment seems to be off the public agenda now, both for drug addiction and alcoholism.

Although there are no national compulsory treatment programs on the books, large numbers of people are forced into treatment one way or another. In Ontario the criminal justice system finances two treatment centres that take patients forced to go there on probation. Other centres take some patients who are forced to attend by courts or probation officers. About 20% of youth at the Addiction Research Foundation are referred by the criminal justice system. Some patients also go into treatment after they have been charged with an alcohol- or drug-related offence. Lawyers often suggest this is a way to impress judges when the case comes to trial or to argue for a lesser sentence. Unfortunately, we don't know how many cases of this

type there are, but one-third of youth seen at assessment centres in Ontario are on parole or probation or awaiting trial.

Self-Help Groups for Young People

When we think of treatment for young people, we often forget the many self-help groups that exist. Of course, the best known and oldest self-help group for alcoholics is Alcoholics Anonymous. However, there are many others for drug abusers such as Cocaine Anonymous and Narcotics Anonymous. All would have some young persons as members, but estimates are precluded by their anonymous nature and abhorrence of record keeping. Alateen is the youth wing of the Alcoholics Anonymous movement and it takes mainly teenagers into its membership. All of these groups provide curative treatment but without professional resources or management.

The self-help movement, especially Alcoholics Anonymous, is very important in Canada for several reasons. The first is its size and scope. Nearly all cities and towns in Canada have one or more groups. In large cities some AA group is meeting every night. As of 1986 there were 4,538 groups in Canada with a total of 76,340 members of all ages. We (Smart et al., 1989) estimated that in Ontario the membership of Alcoholics Anonymous was 75% of the number of alcoholics treated in all types of hospital- and community-based treatment. Thus, the number of people possibly being "treated" or helped through AA is not substantially less than those treated through all other known sources. Of course, there would be some overlap between the two groups. However, we (Smart et al., 1992) have shown that AA membership nearly doubled between 1975 and 1986, and even with a 50% improvement rate that could conceivably account for all of the decline in liver cirrhosis in Ontario.

A further advantage of AA and other self-help programs is their availability and low cost. They cost the taxpayers nothing at a time when hospital treatment can cost $500 per day and last 28 days. Also, there are no waiting lists as there are for

residential and often for outpatient treatment. AA takes all types of alcoholics and through its 12-step or "buddy" system provides 24-hour-a-day counselling or advice. Few mainstream treatment facilities can claim to provide anything similar.

Much controversy surrounds the effectiveness of Alcoholics Anonymous and unfortunately no Canadian studies of effectiveness have been found. However, about 46% of alcoholics in treatment at the Addiction Research Foundation had attended AA. We reviewed studies of the effectiveness of AA and found that empirical estimates of improvement range from 34.6% (total sobriety) to 67% (sobriety or some improvement). A reasonable estimate is about 50% improved or sober and that figure is not much lower than reported for many treatment programs.

As stated earlier the size of the youth component in AA membership is uncertain. However, we know that those in Alateen are young. In 1992 there were 217 Alateen groups in Canada with an average of about 20 members each. That means that about 4,340 teenagers were receiving self-help treatment for alcohol problems. Surprisingly that number is more than twice as large as the number of teenagers treated for all alcohol problems in hospitals (1,844 in 1988). Although Alateen represents a significant self-help treatment resource, we know nothing of its effectiveness in Canada.

Recently a new organization, "Women for Sobriety," became established in Canada. This self-help group was founded in 1975 and now has 5,000 members in Canada, the U.S., Switzerland, Australia and South Africa. WFS views alcoholism as a disease women get because they feel unloved and powerless to act. WFS, unlike AA, rejects concepts of a higher power and the need for self-criticism. It stresses positive perceptions and the special needs of women. At present we are not sure how many young women are involved in the WFS in Canada or elsewhere.

We do not know how many youth receive drug treatment in self-help groups such as Narcotics Anonymous, Cocaine Anonymous and other groups for drug abusers. It

may be, however, that the self-help movement represents a very large resource for aiding youth in overcoming their drug problems, perhaps larger than that provided by hospitals.

Summary

Treatment of alcohol and drug abuse involves acute treatment of symptoms or treatment of the underlying causes by professionals or specially trained people. There are self-help groups providing care to both alcoholics and drug abusers. It is difficult to determine the number of youth treated in Canada, except in the case of methadone treatment. We have information on hospital care, but not on treatment given in community-based centres. Nor do we have many studies of the best sort of treatment for youth, especially for community-based centres and therapeutic communities. Self-help groups such as Alateen are important sources of help for alcohol-dependent youth. They appear to help as many as are being treated in hospitals.

Table 26

Patients Receiving Methadone, 1988 and 1989 - Numbers and Percentages (in brackets)

Age	Male		Female		Total	
Under 18	1	(0)	0	(0)	1	(0)
18-29	157	(9.6)	202	(18.5)	359	(13.2)
29+	1476	(90.4)	890	(81.5)	2366	(86.8)
	1634		1092		2726	

Source: Health and Welfare Canada. Narcotic Controlled and Restricted Drug Statistics, Ottawa, undated.

Table 27

Treatment of Alcohol and Drug Abusers in Ontario, 1988-1989 - Numbers and Percentages (in brackets)

Age	Assessment & Referral		Non-Residential		Residential		Detox		Total	
Up to 17	739	(8.1)	1169	(11.1)	773	(3.3)	163	(1.1)	2844	(5.0)
18-24	1975	(21.9)	2791	(26.7)	3762	(16.2)	1755	(12.3)	10284	(18.0)
25+	6303	(70.0)	6498	(62.2)	18672	(80.0)	12307	(86.5)	42984	(77.0)
	9017		10458		23207		14225		56907	

Source: Rush, B. and Tyes, S. Alcohol and Other Drug Services in Ontario: Results of a Provincial Survey, 1989. Addiction Research Foundation, Toronto, 1990.

Table 28

Percentage of Youthful Patients (Under 26 Years) Assessed for Treatment by Major Problem of Abuse

	1985	1986	1987	1988	1989	1990	1991	1992
Alcohol	36.9	35.3	25.3	20.6	21.7	28.2	34.7	30.2
Cannabis	35.3	37.5	35.3	33.7	23.0	30.5	21.8	17.4
Cocaine	13.9	17.8	20.6	38.0	47.5	34.6	35.6	41.9
Narcotic	1.4	1.0	0.6	0.9	1.8	0.7	2.5	4.7
Tranquillizers	1.5	1.7	1.9	0.9	1.3	1.0	1.2	0.0
Hallucinogens	2.7	1.9	2.5	2.5	1.8	2.3	1.2	3.5
Solvents	1.5	1.7	2.5	2.7	2.6	2.0	1.2	1.2
Sedative/Hypnotics	1.4	0.5	0.5	0.5	0.3	0.2	0.5	0.0
Other	5.0	3.1	2.5	0.7	0.3	0.7	1.3	1.2
Total Number	518	573	314	442	383	298	326	86

Source: Clinical and Treatment Research Institute, Toronto, 1992

Chapter 9

Parent and Community-Based Prevention

Alcohol and drug education in schools has a long but often disappointing history, as we saw in Chapter 6. Partly because of that history, many efforts were made in the 1970s and 1980s to develop drug education programs with a broader base in the community and especially among parents. Many of these programs had an implicit "trickle down" hypothesis that if parents and communities could take the right approach to alcohol and drugs and improve their parenting skills, they would raise young people who would not use drugs. Some programs involved young people directly and others did not, and hoped only for the "trickle down." To some extent these programs were based on social "movements" or on ideas drawn from other sources. For example, the 1970s saw the era of parenting programs. Many books on parenting were published and several were on best-seller lists, e.g. *Parent Effectiveness Training,* among many others (Ginott, 1968; Gordon, 1975; Dreikurs and Grey, 1968; Dinkmeyer and Fry, 1973). Many courses were developed and parents attended to have their parenting skills improved.

There was also a new interest in health programs mounted at the community level. Community-wide programs were developed for well baby care, child inoculation for children's diseases, heart and cardiovascular health and the like. Many elements of these programs were adapted in the 1980s and 1990s as the alcohol and drug field took on community-based programs. Unfortunately, many of the parenting programs have not been evaluated, and many of the community programs are not directed specifically at young people. However, community programs represent an important area in prevention planning, if only because of their newness and size.

Parent Programs

Most parent programs for alcohol and drug education are based on some theory of parenting that stipulates what improvements in parenting will lead to lower levels of drug use. Most assume that improvements in communication and interaction between parents and children are crucial. Others depend on parents modelling good behavior, providing information about alcohol and drug use and becoming aware of values, attitudes and biases.

Most parenting programs seek to make parents better at their jobs, and their proponents expect that in consequence social problems with youth will disappear. The best known of these is Gordon's "Parent Effectiveness Training" (PET) based loosely on Rogers' theories of non-directive therapy. This program requires that parents practise active listening with their children and communicate their feelings to them. Parents are advised not to solve their children's problems, but to create an atmosphere wherein the child can solve problems with the parents' help. Parents help to define the problem and generate solutions without criticizing or being judgmental. The PET approach became the basis for many other direct and indirect approaches to parent drug education. It also is one of the few approaches which has received much evaluation or a real trial in a drug education program which included evaluation. In general, the evaluations of PET show that parents learn new parenting skills and tend to value the program. However, results are inconsistent — some show reductions in problem behaviors (e.g. in the classroom) (Schofield, 1970; Church, 1978), while some do not (see Shain et al., 1980 for a review).

In 1982 Whitehead and Gliksman (1982) reviewed the effectiveness of parenting programs for Health and Welfare Canada. This review included five general programs not specifically oriented towards creating changes in drug use for adolescents and 10 alcohol- and drug-oriented programs. They found that only one of the five general programs received any evaluation at all. That was the PET program, and the results

were mixed. Of the 10 special alcohol and drug programs, only one had been evaluated, and the results were mainly negative but somewhat mixed.

Several parenting programs have been evaluated in Canada but the results are not encouraging. The earliest of these was the study by Shain (1977) using a modification of the PET with 41 parents and a control group of eight. Parents were given 10 two-hour sessions on communication, confrontation, problem solving and values clarification. As expected, parents improved their ability to communicate and solve problems with their adolescents. However, no differences were found between the experimental and control parents in attitudes towards child rearing. Also, the control group improved their drug attitudes without receiving the PET, whereas the experimental parents changed attitudes in a less acceptable way, i.e., their attitudes became more stereotyped, more conservative, less open. In addition, it appeared that the program attracted the parents who least needed it and was not of interest to parents with inadequate parenting skills.

Another study of parenting programs in Canada (Albert et al., 1983) also produced some negative results. This program entitled "Decisions and Drinking: The Power of Positive Parenting" consisted of structured learning experiences including training in role modelling, decision making and parental alcohol use. There were eight half-hour sessions for groups of 10 to 16 parents in several cities in western Ontario. As in most programs, knowledge levels about alcohol improved. However, there were no real changes in attitudes towards alcohol or in parenting knowledge or skills. Unexpectedly, there was a change in a negative direction; parents' attitudes became more pro-drinking. One explanation for this result was that the values clarification approach may have encouraged the negative shift in attitudes. However, this study reminds us that alcohol prevention work is difficult to undertake with parents and can have uncertain outcomes.

A different approach to parents was taken in an Alberta project described by Nutter (1984). The program involved theatrical presentations in which both parents and adolescents participated. The aim was to improve communication between the two groups, especially in relation to alcohol and drug problems in the family. Follow-up evaluations were positive in that most participants felt that it improved communication, and many expressed an intention to discuss the play. However, follow-up participation was poor. Unfortunately there were no pre-test measures on parenting skills or attitudes towards drugs. The post-test only evaluation does not show that changes actually occurred among parents.

Parenting programs for alcohol and drug prevention have had disappointing results so far. Most parenting programs seem to be designed more to make money for their creators than to lead to real changes among parents. Results are not often evaluated, and the few evaluations that have been done give weak positive or mixed positive and negative results. The high water mark for interest in self-help parenting programs seems to be past, and few are now being carried out. Most parenting books slipped off the best-seller lists in the 1980s and the fad seems to have passed.

Parenting programs might have a better place if they were developed specifically for those parents who need them most, not the middle-class parents who seem to take them now. Such parents might be those under special economic or social stress, working single mothers and parents with adolescents at high risk for drug abuse. These parents might also be the ones with their own alcohol or drug problems, or parents who already have an adolescent who is using drugs or alcohol inappropriately. It might be very difficult to get those who most need the programs to take them, as it involves the tacit admission "I am not a very good parent." Perhaps such programs should be offered routinely to parents in drug or alcohol treatment programs as part of their full recovery.

All of the evaluated programs for parents are essentially offered by experts in parenting or drug abuse. However, over the past 10 years or so self-help groups organized by parents themselves have arisen.

The first substantial parents' self-help program was called Toughlove and it meant what it suggests. Parents establish with their teenagers that they love them and that the love will continue, but they are putting limits on the sort of behavior they will tolerate. The program was developed by parents in Pennsylvania who tired of drug use and other delinquencies on the part of their children.

Toughlove is based on the idea that parents with troubled teenagers feel lonely, guilty and helpless and will get little help from professionals or experts. Parents can join a group in their community with parents having similar problems. Toughlove provides manuals on "how to do it" and other printed materials, trains parents in the approach and creates a network of parents who will support each other in the work (Toughlove Associates, 1982a; 1982b). The emphasis is not on improved communication or insight but on establishing rules, making them known to the teenager, enforcing them and providing consequences when they are broken. Parents provide help for each other in various ways. For example, if a teenager is late coming home at night they might put a sign on the door saying "It's past midnight. You are not welcome here. Go to Mr. and Mrs. Smith's (neighbors who are in the Toughlove network). We will discuss it tomorrow." The Toughlove movement is about 15 years old and there are branches in several large Canadian cities, although the exact number seems to be unknown. Unfortunately, we are not sure whether getting tough can really modify drug use, especially in heavy users, as evaluations have not been published.

The largest parents' program at present is PRIDE, which has the aim of helping parents deal with alcohol and drug problems among their children, as well as lobbying governments to change laws about drugs. MADD — Mothers Against Drunk Driving — began because parents were concerned with deaths of young

people in drinking-driving accidents, and is a force to maintain laws against drunk drivers. Most of these groups provide counselling and other forms of help to parents suffering the consequences of drug use either by their own adolescents or other people. They can probably be very effective with legislators, as they are eloquent grass roots organizations with a clear message. Unfortunately, we know little of a systematic nature about how they work and how effective they are.

Community-Based Programs

In community-based prevention programs, the typical focus is everyone at any level of risk in the community, rather than special groups such as students or parents. These programs tend to be large in size and well-funded, and to extend over several years. Several such programs have been evaluated and even more are under way but at too early a state for evaluation. They represent the "new wave" of prevention as programmers try to move outside the school to engage large numbers of people in preventing alcohol and drug problems. Unfortunately, few community programs have focused on youth or even paid much attention to changes in youthful drug use.

The basis and model for many community prevention programs was the Stanford University Cardiovascular Health Project (Farquhar, 1977) which began in the 1970s. It undertook a prevention program of a size and complexity never seen before. The program utilized mass media to disseminate information about cardiac health, fitness, smoking and diet, as well as face-to-face instruction. Self-control training and behavior change methods were taught in each approach. In the California cities, data on knowledge of heart disease, diet, smoking, blood pressure, body weight, and cholesterol were gathered for 1,200 men and women aged 30-59. A control community received no program and part of one experimental community received mass media but no face-to-face instruction. The campaigns had positive effects on knowledge levels and lowered risk factors after the first-year follow-up, with those

receiving face-to-face instruction showing the largest gains. After the second year, the media-only groups also showed substantial gains and the gap between the experimental programs narrowed. This study achieved success in a difficult area and hence it became known throughout the world. It rapidly became a gold standard for the prevention of other health and social problems Often special adaptations were made for the local scene. Those seeking to develop community prevention in the drug abuse area emulated the Stanford study so far as possible.

One of the earliest and largest community programs ever developed for the prevention of illicit drug use among adolescents was undertaken by Pentz and her colleagues in Kansas City (Pentz et al., 1986; 1989; 1990). Its aim was to decrease alcohol, tobacco and cannabis use among adolescents, their parents and other residents of the city. This was a large-scale study lasting more than five years. The following components were used:

(i) a 10-session school program for training youth to resist drug use;

(ii) 10 interviews and role playing sessions with family members to get them to discourage drug use;

(iii) mass media reports such as newspaper articles and one- to two-minute news clips about the program (about 16 television events, 10 radio and 30 newspaper events) and a televised press conference;

(iv) training of nine television station managers, 65 teachers and four students per class in drug prevention skills;

(v) special public meetings of community leaders where drug problems were discussed.

In the experimental area (Kansas City) after the program, the rate of alcohol use in the previous week was 11% vs. 16% in the control city with no program. For cannabis, the differences were 7% vs. 10%.

In general, the Kansas City community prevention program was a success, but the differences created were not numerically large. Of course the program was very expensive and time consuming — the cost was reported to be about $17 million, and the program required a large staff and a concerted effort over a long time. This type of program is not practical for all communities, only for those with many resources and a long-term commitment to drug prevention. For many smaller communities with more limited professional resources, it is probably not a useful model.

Only one major community development project on alcohol and drugs has been fully reported in Canada. This program was designed by Giesbrecht and his colleagues (1990) as an assessment of the distribution of consumption model developed by Ledermann (1956). This model specifies that a change in the proportion of heavy consumers could reduce overall per capita consumption. An intervention plan was devised for an experimental community and there were two control communities which did not get the interventions. The interventions included (i) an education and counselling program for heavy consumers contacted through advertisements and local physicians; (ii) media ads and mail-outs about heavy drinking; (iii) presentations and workshops for professionals, unions and the general public, and (iv) meetings with health and social service committees and local professionals. All of these were organized to promote low-risk practices around alcohol consumption. The program increased the visibility of alcohol issues in the mass media and did reduce alcohol consumption among some heavy drinkers. Surveys of the general population before and after the program indicated that the experimental community reduced its drinking slightly, relative to the other communities. However, the decline in alcohol sales or alcohol-related problems (such as hospital admissions or alcohol-related arrests) for the experimental community was no greater than for the control communities. Unfortunately for our purposes the

Giesbrecht study did not analyze data by age and we are not sure what the effects of the program were on youthful drinking.

Many problems arose in the conduct of the project, as often happens in community projects (see Giesbrecht et al., 1990 for a review). Despite many preliminary discussions, there was resistance to the idea of intervening with heavy drinkers. Few physicians referred patients and there was active resistance in the treatment community. Perhaps too few heavy drinkers were referred to affect overall consumption much. Also, community structures and power networks were perhaps not fully used as the planning and project staff came from outside the community. This is likely to be a problem with many community projects. They are often undertaken in small communities by experts from universities or research centres far away. It is then difficult for project staff to be accepted and avoid the status of "interloper" or "parachutist" in a community that is small and somewhat closed. Of course, few small communities have the resources or people who could put on large-scale projects without outside help.

Several smaller community projects have been described in Canada but all of them seem directed at the population as a whole, rather than youth specifically. For example, Douglas (1990) developed a program to inform the people of Thunder Bay, Ontario, about rules against drinking in parks and unlicensed recreational facilities. The campaign started in 1983 and ran for a year, involving news items, public service announcements and paid media advertisements, as well as the distribution of pamphlets, posters and theme buttons. After the campaign, residents (compared to a control community) were more likely to comply with the new rules, were less supportive of under-age drinking and drinking in parks, and expressed more intent to rent facilities not serving alcohol. There were also few reports of alcohol problems in recreational facilities. Unfortunately, there were no data on the effects of the program

on youthful drinking. Many youth do drink in parks and in recreational facilities, especially problem drinkers, and it would be useful to know how to help them.

Caverson (1990) has described a "Sober Driver" program which was directed at non-drinking drivers found in spot checks. The program rewarded sober drivers by thanking them and giving them a plastic licence holder. At the same time there was an extensive media program about drinking-driving. There were problems in collecting spot check data from control areas and in completing a telephone survey about the campaign. Hence conclusions about the impact of the program are very tentative. Again, no data were gathered on the effects of the program on youthful drinking.

In conclusion, parenting and community programs for alcohol prevention have yet to show much impact in Canada. Parenting programs may be best focused on parents who are heavy drinkers or who have children who are at high risk. Nevertheless, such programs seem to be out of fashion and are rarely undertaken. Several community programs in the U.S. have had important preventive effects but they tend to be very expensive. Community programs in Canada have been smaller and several have had major problems with implementation or evaluation. None has shown a major impact on youth and none has paid much attention to youth. Also, no evaluated programs have been devised to deal with the illicit drug problems which are typical of many communities in large cities. The preference for most researchers is to develop community programs in smaller centres, relatively isolated from big city media and other influences. This means that such programs do not arise from the community but are grafted on to them from the outside. Perhaps grass roots community programs would have a better chance of success.

Chapter 10

Alcohol and Tobacco Policy Issues Relevant to Youth

Policy refers to the laws, regulations, procedures, and official and unofficial controls that society makes for dealing with a particular area of human activity. All levels of government and most institutions have some policies about drinking and drug use. Of course, the simplest ones prohibit alcohol or drug or tobacco use in a given area. Others may govern the type or amount of alcohol or tobacco that can be used, e.g., you can drink in bars but not get drunk, and on many airlines you can still smoke cigarettes but not cigars or pipes. Some policies govern drug-taking behavior, but others are designed to prevent it or to provide treatment when it gets out of hand. Every institution makes policies about drugs — even families, e.g., no under-age drinking except at Christmas; no drinking when you have borrowed a car. For a policy to be effective, of course, people have to know it and know that it will be enforced, or else they can ignore it. To catalogue all the policies affecting drinking and smoking in Canada would be an enormous task, especially if we included all levels of government and the larger institutions such as those associated with work, school and the family. It would be an even larger task to find out what policies were known to people, how seriously we took them and how effective they were. What I will attempt here is much smaller: a review of policies that especially affect young people and their alcohol and drug use. We can improve policies that affect young people in Canada with relatively little effort.

Before beginning, it is worth noting that many policies about drinking and smoking are not specially directed at young people, and some of them are largely

irrelevant to young people. However, most laws and regulations governing the sale and distribution of alcohol and tobacco apply equally to people of all ages. The same is true for the Narcotic Control Act and the other drug laws. Nevertheless, we are frequently unaware what young people make of them or how effective they are for them.

Many of our most important policies meant to control alcohol and tobacco use will not have much influence on youth, as they are not the targets. Some examples are employee assistance programs for alcohol and drug users; most young people are not employed and very few have the sort of problems that would get them into such programs if they were employed. The same is true of rehabilitation and treatment programs generally; few young people need them. Young people can be most influenced by policies specifically directed towards youth, e.g., drinking-age laws and policies established by schools, social agencies and employers who hire large numbers of young people. In this chapter, I review research relevant to drinking ages, access to alcohol, drinking-driving, school drug policies and municipal alcohol policies, as well as those having to do with victimization, such as warning labels and programs to reduce physical and sexual abuse.

Youthful Access to Tobacco

Many policies limit the access of all potential drinkers and smokers to their drug of choice. Of course, society has better controls on legal drugs such as alcohol and tobacco. Controls on the availability of alcohol and tobacco such as hours of sale, numbers of outlets and especially price have been found to limit both alcohol and tobacco consumption (Bruun et al., 1975; Frankel, 1988), but most of the studies look at effects on total consumption rather than youthful consumption.

Special programs exist to control youthful consumption of alcohol and other drugs through new policies. Youthful access to alcohol, tobacco and other drugs is

somewhat limited by existing laws, and better methods to control such access are difficult to find. Young people have good access to alcohol and tobacco and much more difficult access to illicit drugs. In our school study we asked how easy or difficult it was to get various drugs (Table 29). We have data for 1981 in the case of some drugs, and for 1991 where others are concerned, but only for alcohol and cannabis do we have data covering both years. More than 70% of 1991 students (almost all of whom are under age for drinking) said alcohol was very easy or easy to get; slightly more said the same for tobacco in 1981 and probably that has not changed much since. Far fewer students said cannabis was easy or very easy to get in 1991 (31.8%) and very few students said that about cocaine (14.3%). It is clear that access to alcohol and probably to tobacco remain very good, while easy access to cannabis has declined in the past 10 years.

Under the Tobacco Restraint Act, tobacco cannot be sold or given to people in Canada under the age of 16, and it is illegal for them to smoke. Most provinces have a law that makes sales to minors under 18 illegal unless there is a note from parents. However, young people can buy cigarettes from vending machines, which are blind to age, or from store owners who don't care. The weakness of the law is illustrated in that only one store owner has been convicted since the act became law in 1908 (*Toronto Sun,* 1992). The fine was $10, not a large penalty today. Of course, it is probable that other, less formal methods of dissuading store owners are often used; communities should have the policy of identifying and discouraging store owners who sell tobacco to minors. There seems no way to monitor vending machines, and many people have suggested, without success, that they be made illegal. Countries such as Japan also have vending machines for alcoholic beverages and we should hope that they never make it to North America. Better enforcement of existing laws on smoking and stronger penalties could be effective in controlling youthful

smoking, but police, legislators and parents do not seem to want this to happen very badly.

Recently, new proposals were made by both provincial and federal governments concerning smoking control for young people. The Ontario Minister of Health proposed (*Globe and Mail,* January 19, 1993) that: (i) the age for buying tobacco be raised to 19; (ii) all vending machines should be under adult supervision (but how this would be done is not clear); (iii) "kiddie packs" of five cigarettes would be banned (some stores will even sell single cigarettes); (iv) fines would be raised for selling to under-age youth; (v) retailers would have to post health warnings and age limits, and (vi) smoking would be banned in all schools, hospitals, banks, retail stores, elevators, laundromats and transit shelters. Not much debate has occurred on the proposed changes and it is not clear that they will all be passed. Most of them are desirable but difficult to enforce.

The federal health minister also proposed a variety of anti-smoking measures (*Toronto Star,* February 5, 1993). Among those suggested were: (i) raising the age of purchase to 18; (ii) restricting vending machines to places licensed to sell alcohol (but that could mean restaurants where youth are admitted), and (iii) fines of up to $50,000 for selling to minors.

This would mean fines were larger than for selling narcotics. Again, these proposals may not become reality, as the legislation will be debated before it is passed.

Most of what we know about controlling youthful smoking comes from the U.S. However, Ferrence et al. (1991) have examined data on smoking and price for adults and adolescents aged 15-19 in Canada over the period 1980 to 1989. During that time regular smoking rates fell by about half, and the per capita consumption of cigarettes fell by almost two-thirds. The government of Canada had a clear policy of increasing the price for tobacco, despite many complaints from the tobacco industry.

Ferrence et al. found that increased prices resulted in more reduction of consumption among adolescents than among adults. They estimated that a 10% increase in prices of cigarettes (over inflation) would result in a 17% decrease in the total number of cigarettes consumed, a 14% decrease in the number of smokers and a 6% reduction in consumption per smoker. It appears, then, that further increases in tobacco prices could reduce smoking even more. If regular smoking were to decline at the rate it did in the 1980s, by the year 2000 only about 5% of adolescents would be smokers. It would then become a rare, risky activity disapproved of by most adolescents and probably seen as the mark of a deviant, as is regular cannabis use today. Efforts should be made to continue the price increases of the 1980s well into the next century.

Of course, increasing prices is not the only policy affecting youthful smoking in Canada. There has been a ban on media tobacco advertising and many recent efforts to make smoking inconvenient for young people. For example, schools and workplaces have banned smoking and some municipalities such as Toronto have even banned smoking in public places such as stores. We do not have good estimates of how important these new policies are in reducing smoking rates. However, research in the alcohol field suggests that decreases in overall availability should reduce smoking. Policies of reducing availability and making smoking more difficult should be continued.

One new policy option that is rarely discussed is banning tobacco sales altogether. The government of Canada has clearly established that smoking is dangerous for health and should be reduced in Canada. Tobacco can no longer be advertised; the packages contain health warnings and nearly everyone agrees that tobacco is a dangerous product. In fact, tobacco seems to be the only consumer product that it is legal to sell but not to advertise. Why can we not have a complete ban on tobacco sales? Probably there is a concern about loss of jobs for people in the industry, loss of

revenue from taxes and increased smuggling from the U.S. However, these problems could be overcome and are probably overrated. Serious attention should be paid to having a total ban on tobacco in Canada. Perhaps it can be phased out over time as prices are increased astronomically over the next 10 years so that smokers are warned in time to stop and manufacturers can diversify.

Youthful Access to Alcohol

As stated earlier, access to alcohol is very easy for young people. All provinces have age 19 as the lower limit for the purchase of alcoholic beverages, except Manitoba, Quebec and Alberta where it is 18. In Ontario, but not other provinces, possession or drinking of alcoholic beverages is also illegal under 19 years of age. Of course, youth over the age of 19 have legal access to alcohol. As we saw earlier, older youth tend to drink more often and have more problems.

Current laws in most provinces require that young people show proof of age or an age of majority card in order to buy alcoholic beverages. Of course, these cards can be borrowed or obtained illegally, and enforcement of the laws for age of majority is weak. We have much informal evidence of this from hearsay and at least one Canadian study. Young people can often buy alcohol under age and a study in Minnesota found that they were most successful with clerks who were busy or inexperienced, or were young women and unknown to the buyer (Wagennar et al., 1992).

In Ontario the drinking age was increased to 19 by law in 1979 and at the same time young people were required to have age of majority cards in order to purchase alcohol. As these cards had the bearer's picture, it was expected that they would reduce under-age drinking. In 1981, we included questions on age of majority cards in our Ontario student survey (Smart and Adlaf, 1987). Almost no students had the cards (13.9%), but most students (75.3%) were drinkers and 99% were under age.

Only 9.3% had their own cards and 4.6% used or borrowed other people's cards as needed. Those who had no card were just as likely to drink in taverns, bars or restaurants as those who had their own card. However, those who borrowed a card were more likely to drink in pubs or taverns and at school dances. They drank much more often and reported more alcohol problems than those with no card or their own card. Moreover, 88% of those with their own card were actually under age. We concluded that age of majority cards were a poor control device for young people, and that still seems to be true. Again, it is a matter of enforcement, but good monitoring of restaurants and bars for under-age drinking violations would be a very large task.

Much youthful drinking is done in places other than licensed drinking establishments and hence could not be controlled by age of majority cards. Young people sometimes take alcohol from parents' supplies, but most of those under age get it from friends or siblings or at parties. Policies to control this sort of drinking are best established by parents rather than governments.

The Drinking Age Controversy

An important issue of the 1970s was what the drinking age should be, but that issue seems to be largely dead in Canada now. In Canada, drinking ages in most provinces were reduced from 21 to 18 or 19 and the same changes were made in about half of the states in the U.S. The overwhelming evidence (Smart and Goodstadt, 1977) was that youthful drinking increased after those reductions and that problems such as drinking-related accidents also increased.

Lowering the drinking age was clearly a bad idea from the public health standpoint. After the disillusionment with these reductions, several provinces and states raised drinking ages again, but usually to 19, not 21, at least in Canada. In the U.S. the federal government passed legislation resulting in states being denied

highway repair funds unless they increased the drinking age to 21. All states have done that now, while in Canada the drinking age is still 18 or 19. If we compare drinking levels among students aged 18 and 19 in Canada (Eliany et al., 1992) and the U.S. (Johnson et al., 1988) we see that they are the same (about 80%). However, it is very difficult to get comparable measures of heavy drinking or alcohol-related accidents on a national level.

We found (Vingilis and Smart, 1981) that the increase in the drinking age from 18 to 19 in Ontario had mixed effects. School survey data found no change in the proportion of older vs. younger students reporting intoxication or heavy alcohol use. Only 20% of school vice-principals found a decrease in drinking-related problems; the rest found none. In general, the immediate effects of the new law seemed minimal, and longer-term changes may have been more striking. Substantial changes were not expected, since few young people (only those aged 18) were affected.

We can find little reason to recommend an increase in the drinking age to 21, as in the U.S. Many research studies in the U.S. have shown that the increase in drinking age from 18 to 21 has reduced drinking and driving fatalities (Stewart and Klitzner, 1990). Although such an increase would probably reduce levels of drinking and drinking-driving for people aged 19 to 21, studies in Canada don't give us good reasons to undertake the increase. In Canada drinking and drinking problems are declining rapidly among young people and it would be difficult to get public support or the political will to change the drinking age to 21. A recent survey in Ontario indicated that about half the adult population want the drinking age to be increased and half want to leave it the same. Only 5% want it decreased. Typically, young people want the drinking age lowered; older people don't. The drinking age issue seems to have slid off the public agenda, probably for good reasons and for the foreseeable future.

Drinking-Driving Issues

Although drinking-driving and the associated accidents are declining for young people, they still remain a problem. The drinking-driving laws in the Criminal Code apply equally to all ages of drivers. They forbid impaired driving (drinking with a BAC over .08%, and refusing a breath test). About 20% of students in Ontario still drink and drive in a given year and we know that they can have accidents at very low blood alcohol levels (Simpson et al., 1982).

Some people have suggested that learning to drink and learning to drive should not be done at the same age, i.e., around 16 to 18. However, changing that would mean increasing the driving age to 20 or 21, since governments don't have much control over the age when people drink. Parents and teachers could be encouraged to get students to postpone drinking; the age at which young people first drink is getting higher, and perhaps could be increased further. Parents could refuse to allow adolescents to be licensed until 21 or so. Governments could raise the driving age to 21 but that would be unpopular, especially with voters aged 18-21. The best and most practical policy for both parents and teachers who teach alcohol education is to get students to postpone drinking or at least heavy drinking. However, Stewart and Klitzner (1990) found that contracts with parents not to drink and drive were ineffective.

Some countries have experimented with special laws for young people, such as a lower BAL limit. First-year drivers in Australia have a zero BAL limit. An evaluation study (Drummond et al., 1987) found that this reduced adolescent night-time weekend driving, which is a time for many alcohol-related accidents. However, no data were presented on accidents. The state of Maine has a .02 BAL limit and a one-year licence revocation as a penalty for youth (the BAL limit is .10 for other drivers). Hingson et al. (1986) found initially that self-reported drunk driving and accidents declined as did actual personal injury accidents, but later results were less striking.

Also, some 18 American states have night-time curfew restrictions for young drivers, e.g., no driving after 10 p.m. or midnight. Preusser et al. (1984) studied restrictions in four states and found that they dramatically reduced accidents during those hours that were restricted. Suggestions have been made for a lower BAL limit for young drivers in Canada, and the Federal Ministry of Transport is now considering proposals. It appears likely that both lower BALs and driving curfews for youth would have beneficial effects on alcohol-related accidents.

Another method for reducing youthful drinking-driving risks involves education or special courses. Most young people learn to drive through driver education courses and many insurance companies either require them or offer lower rates to graduates of such courses. Some criticism has been made of driver education merely because it increases the licensing of young drivers who would not otherwise be able to get a licence (Stewart and Klitzner, 1990).

Mann et al. (1986) conducted a study of school-based drinking-driving programs. Many of those programs were for those convicted of driving while impaired, few of whom are young people. However, some were education courses for young drivers. Most programs were able to show short-term improvements in knowledge and attitudes about drinking-driving, but few have examined impacts on actual drinking-driving or alcohol-related accidents.

One of the few Canadian studies (Albert and Simpson, 1985) evaluated the impact of a drinking-driving program based on the health belief model, i.e., the concept that people generally evaluate options and choose the one that is most likely to maintain or increase health. The program was given to Grade 11 students and a control group was also included. Those in the program improved their knowledge and attitudes and had decreased intentions to drink and drive. However, those in the experimental group reported an increased level of drinking. It is not clear whether this was an experimental effect or due to non-random assignment to groups. On the basis of

current research it has not been established that drinking-driving education can reduce alcohol-related accidents. It may have untoward effects, and a strong policy shift toward such programs is not warranted.

Warning Labels on Alcoholic Beverages

Several countries, such as Mexico, Colombia and the United States, have warnings on the labels of alcoholic beverages. In Mexico and Colombia the warnings remind drinkers that alcohol (abuse of alcohol in Mexico) can be harmful to their health. However, in the U.S. the label introduced in 1989 states:

> *"Government Warning: 1) According to the Surgeon General, women should not drink alcoholic beverages during pregnancy because of the risk of birth defects. 2) Consumption of alcoholic beverages impairs your ability to drive a car or operate machinery and may cause other health problems."*

These labels are to be reviewed soon to see whether other warnings are required. The need for warning labels has been discussed in Canada, but no serious legislative or regulatory steps have been taken to require them.

It is too soon to have an evaluation of their impact on drinking in the U.S., but they could impact on rates of fetal effects and the fetal alcohol syndrome. Most of the issues on both sides of the question have been discussed elsewhere (Smart, 1990). We do not have many programs for the prevention of alcohol-fetal effects in Canada and the problem is substantial in some native communities. Some have objected to labels as unnecessary or ineffective, as few women see the bottle they drink from. However, some do and they might be influenced if they were pregnant.

The effectiveness of warning labels would be enhanced if combined with government media-based programs and school programs to educate people about the dangers of drinking while pregnant. Although the Canadian Medical Association and the Standing Committee on National Health and Welfare recommended alcohol

warning labels, there seems to be no political will to introduce them at present. Canada should have health warning labels on alcoholic beverages and programs to inform the public about the risks of drinking and pregnancy. They could do no harm and might do some good in an area with very few programs and little research.

Programs for Abusers of Children

Several studies in Canada have shown that young people who are physically or sexually abused are heavily represented among street youth (Radford et al., 1989); Smart et al., 1992), prostitutes (Youth Service Bureau, 1991) and runaways (Kufeldt and Nimmo, 1987). All of these groups have very high rates of alcohol and drug problems as well as other psychiatric problems such as depression, paranoia and anxiety/panic states.

In our study of street youth in Toronto (Smart et al., 1992) we found that about two-thirds had been physically abused and 43% said that abuse was a significant factor in their going on the street. About 21% had been sexually abused by someone living with them and 15% said that sexual abuse was an important factor in their going on to the street. Physical abuse rates were about the same for males and females, but three times as many females as males were sexually abused.

Much of this abuse doubtless came from parents who were alcohol or drug abusers. However, little research has been done in this area. One study in Edmonton got data from 1,200 respondents in a household survey (Bland and Orn, 1986). Female but not male care givers who were alcohol or drug abusers, currently depressed or having antisocial personalities, physically abused their children far more than did other parents. However, we have few studies on how sexual abuse relates to alcohol and drug use by parents and the long-term harm caused. The issues of physical and sexual abuse are sensitive and difficult for any society to confront. We have few programs for such abusers in Canada and even fewer that have the aim of

preventing abuse of young people by abusing parents. More programs of that type are needed, but they should be carefully evaluated.

Other Institutional Policies

Originally, research on policies in the alcohol and tobacco areas focused on government policies and laws. Most of those laws dealt with price and other aspects of availability and were matters for the provincial and federal governments. However, most recently it has been realized that all institutions can create policies (if not actual laws) governing the activities of people who use those institutions. It is now recognized that all persons and institutions can be legally liable for drinking and drinking-related accidents that occur on their property or under their sponsorship. For example, in the alcohol field there is more tendency for municipal authorities as well as bars and taverns (Single, 1990) to make policies about alcohol consumption, because they are liable for accidents happening at events they sponsor. It is clear, too, that social and recreational clubs that get special occasion permits to provide alcohol have responsibilities to prevent alcohol problems (Smart, 1988). Also, schools are now making policies about alcohol consumption among students, as well as about alcohol education in the classroom. I discussed some of these issues in Chapter 9. They need not be repeated here except to say that municipalities, schools and all other institutions have the responsibility to prevent any alcohol consumption by minors, and risky behavior by people drinking at their events regardless of age. All such institutions should establish clear policies which support these objectives and monitor how well they are being met.

Family Policies

Often the family is one of the most difficult institutions in society to change or influence. Almost everyone is a member of some family, although there may not be

much contact among the members. Families are difficult to influence because the concept includes nearly everyone; there are so many types of families (traditional, single parent, extended, blended, homosexual, lesbian) and there is no one information source or rallying point for them. We know too that families contribute to alcohol and other drug problems as well as being the source for solutions to them. What should family policies be for helping youthful drinkers? Research does not give us clear directions, but my suggestions are:

(i) Parents should become good role models wherever possible and keep their own drinking within safe limits. Risky drinking should be kept to a minimum. Parents who have alcohol problems should get treatment at an early stage. The same advice applies to smoking, but ideally parents should not smoke.

(ii) Parents should be aware of current drinking habits and practices among youth and monitor them carefully. They should allow adolescents to drink moderately at family events if that is acceptable, however, abstention from drinking should also be an option. Parents should establish that they expect moderate drinking outside the family.

(iii) Parents should know the drinking habits of their adolescents' friends. Heavy-drinking friends may eventually mean heavy drinking by everyone in the group. Parents should discourage heavy-drinking friends and encourage those who drink moderately or not at all.

(iv) Parents should not leave large amounts of alcohol around in situations where young people might be tempted to use it, e.g., if these young people are heavy drinkers, or if there is an unmonitored party situation to which many unknown adolescents may come.

(v) Parents should establish a policy of no drinking-driving *under any circumstances* for any family member — including themselves.

All of these suggested policies are based loosely on research findings and hence are good advice. Unfortunately, we are uncertain exactly which family policies really lead to safer youthful drinking practices. The exception is that heavy drinking parents are more likely to have heavy drinking adolescents (Cloninger, 1992) and parents should take steps to avoid that.

With regard to smoking, I recommend essentially the same policies except to avoid any attempt at "moderate" or "social" smoking as with alcohol. Parents should not smoke and should encourage their adolescents not to smoke and not to be influenced by those who do.

In conclusion, what are the best policies for society to pursue in order to control drinking and smoking by young people? They would certainly include:

(i) continuing controls on the availability of alcohol and tobacco, especially via price;

(ii) enforcement of laws against under-age purchase of tobacco, including sales from machines;

(iii) an eventual ban on the sales of tobacco, probably phased in by higher pricing and helped by educational programs;

(iv) better enforcement of laws on under-age drinking by both parents and licensed establishments, especially unsupervised or heavy drinking;

(v) encouragement by parents and teachers for young people to postpone drinking, and especially heavy drinking, to later teenage years;

(vi) lower legal BAL limits, probably zero, and driving curfews for youth;

(vii) warning labels on alcoholic beverages combined with educational programs about fetal effects;

(viii) better prevention programs for alcohol-abusing parents who abuse children physically or sexually;

(ix) more institutional (i.e. non-government) policies preventing under-age drinking, especially heavy drinking;

(x) family policies that help young people avoid heavy drinking situations;

(xi) family policies that discourage smoking of any type.

Most of these policies are not new, but revisions of what already exist. Much could be done just by enforcing the policies we already have, especially those on under-age purchases of alcohol and tobacco, and the current drinking-driving laws.

Table 29

Percentage of Ontario Students Stating How Easy or Difficult for Them to Get Drugs, 1981-1991

	Impossible/Very Difficult		Difficult		Easy/Very Easy	
	1981	1991	1981	1991	1981	1991
Alcohol	16.0	18.6	7.2	11.0	73.2	70.4
Tobacco	16.0	-	3.9	-	80.2	-
Cannabis[1]	26.1	41.1	8.4	10.6	47.6	31.8
Cocaine[1]	-	65.2	-	15.4	-	14.3

[1]Numbers do not add up to 100 because some students do not know what cannabis and cocaine are.

Source: Smart et al. (1991)

Chapter 11

Legal and Policy Issues for Illicit Drugs

Every country has policies and laws designed to limit the manufacture, importation, distribution and possession of most drugs for which there is an abuse potential. Of course, these laws carry penalties involving probation, fines or jail terms for those convicted.

We seem to have more laws for illicit drugs than for alcohol — most of them federal. The main laws in Canada respecting drugs are: the Food and Drugs Act, controlling most proprietary, patent medicines, hallucinogenic and psychotropic drugs; the Narcotic Control Act, controlling opiates, cannabis and cocaine, and the Young Offenders Act (not specific to drugs but dealing with youth). Among legal experts and criminologists (but not police), these laws are viewed as harsh in the penalties provided and the way evidence can be gathered for their enforcement. For example, Solomon and Usprich (1991), two well-known professors of law, stated that "there are broader (police) powers in even a minor drug case than in a murder, an arson, a rape or other serious criminal investigation." For cannabis, but not other drugs, the general public also views these laws as too restrictive.

Deterrence and Drug Laws

Our history of a "law and order approach" and strict legal drug controls suggests that the Canadian people and their political leaders believe in the "deterrence" theory. In its simplest form, the deterrence theory states that people are discouraged from engaging in criminal behavior by strong laws with severe punishments. "Specific" deterrence refers to punishment intended to prevent a convicted offender from engaging in another crime of the same type. "General" deterrence occurs when

people in general are discouraged from starting any criminal behavior because they fear strong laws with severe punishments and they expect to be caught. In theory, deterrence works best where crime detection is very likely, penalties are stiff and justice is swift. All the evidence is not yet in, but the case for a general deterrent effect of laws is weak (see Teevan, 1976; Zimring and Hawkins, 1973; Erickson, 1992; Solomon and Usprich, 1991, for reviews). People usually obey laws because of a general respect for law and for societal values, not fear of punishment. Also, people don't want to be seen as criminals or deviants by their friends or family. Most have no motivation to do other than obey the law, especially when it comes to serious crimes such as murder or assault or even drug-related crimes.

Few people convicted of drug offences seem to be deterred in the specific, legal sense. For example, Erickson's study of "Cannabis Criminals" (1980) showed that 92% of people convicted of a cannabis offence continued to smoke cannabis after a year and after a seven-year follow-up (Erickson, 1983). Many studies have shown that heroin addicts return very quickly to addiction after a prison term (Vaillant, 1966; Duvall et al., 1963; Richman and Humphrey, 1969) and hence are not often deterred. Moreover, our study of cocaine users in the community showed that although more than half had friends who had been convicted, almost none expected to get caught themselves (Erickson et al., 1987).

Our school study also sheds some light on the strength of the deterrence theory. In Table 30, I have summarized some of the results from our 1989 study relevant to deterrence from cannabis use. About 30.1% of students had used cannabis in their lifetime, but only .4% or one out of 75 had been arrested for a cannabis offence. When asked about their reason for <u>not</u> using cannabis, most mentioned lack of interest, health, or other reasons and only 1.2% said that illegality was important. Even fewer mentioned fear of being caught by police as a reason for stopping cannabis use (.3%). When asked about the most serious consequence if they did use cannabis, far

more were worried about parents catching them (40.4%) or health problems (36.0%) than worried about the police (23.6%). Generally, when you are young your parents pose a more immediate and credible threat than police, and the same principle applies to drug use.

Sometimes there is a concern that young people are pressured to use drugs by users or "pushers." Possession offences are often justified as an important means to control pushers. We asked students about being offered alcohol and drugs or pressured to use them. Most students were offered alcohol — more than twice as many as were offered cannabis. Surprisingly few students were pressured to try cannabis (5%) and far more were pressured to drink alcohol (Table 31). Generally, students do not feel pressured to use drugs by pushers or anyone else, but initiate it on their own or with friends.

Drug laws are meant not only to deter, but also to decrease the availability of drugs — to dry up the supply so that people are not even tempted, or if tempted, cannot find the drug. Most internationally controlled drugs seem *not* to be very available in Canada compared to many other countries. A study for the World Health Organization (Smart and Murray, 1981) of drug availability and legal controls in some 23 countries appeared in 1981 and I have modified it slightly to reflect current realities as I know them. My assessment of availability was based on whether drugs are cultivated, manufactured or repackaged and whether they are controlled by a prescription system. Table 32 shows the results. In Canada, cannabis is cultivated, but no other illegal drugs or plants to be made into illegal drugs are grown. Psychoactive drugs are not manufactured, but there is some repackaging of imported psychoactives and sales are controlled by a prescription system. Availability of illicit drugs in Canada is less than in most other countries of the 23 studied.

Often more drug use occurs in populations where drugs are easy to get. For many years we have asked students about perceived drug availability, i.e., how easy or

difficult it was for them to obtain drugs. In 1977 we found that in geographic areas where most people felt drugs were easy to get, there was more use of drugs such as cannabis, tobacco, alcohol, LSD, non-prescribed tranquillizers and heroin (Smart, 1977). Availability of drugs was a significant predictor (but not the best one) for four drugs: cannabis, heroin, alcohol and tobacco, but not for the other two. We have not repeated that study with more recent data, but the results should still be valid, although perceived availability is much lower now for students.

Another study (Smart, 1978) showed that the distribution of drug use was unimodal in seven areas of Ontario. In this distribution there are many infrequent users, fewer moderate users, and very few heavy users. Normal or infrequent use shades gradually into heavy use and there is no clear distinction between them. The curves seem to be essentially the same shape for several countries and for all drugs. This same study showed that where there was more drug use, there were more problems. Students who used more drugs were more likely to have problems. Perhaps limiting access to drugs could reduce the numbers of users and also the numbers with problems. Theoretically, attempts to reduce the number of drug abusers or heavy users *without* taking these intermediate steps will be ineffective, as has been argued in the case of alcohol controls (Bruun et al., 1975). However, it is not clear that availability can be reduced by drug control laws alone. What probably happened in Ontario when drug use decreased was that health concerns about cannabis reduced the numbers of users. That meant that fewer drug sellers were needed and their numbers declined (Smart et al., 1992). Consequently, there were fewer people who had friends who were users or sellers of cannabis and they reported that cannabis was less available.

Canadian Drug Legislation

In Canada, drug legislation is mainly under federal rather than provincial jurisdiction. The Canadian constitution does not formally recognize drug issues nor does the Charter of Rights and Freedoms. In practice, such legislation rests with the federal government on the basis that measures on "peace, order and good government" and "criminal law" are the territory of the federal government (Le Dain, 1973). Certainly, the main laws pertaining to drugs are federal, including the Hazardous Products Act (HPA), the Narcotic Control Act (NCA), the Food and Drugs Act (FDA), the Young Offenders Act (YOA) and the Criminal Code. There is a new law being considered which would amalgamate the NCA and FDA but it is not yet in effect.

Various provincial pharmacy acts control the training, licensing, record-keeping and other activities of pharmacists, who, of course, sell drugs. Although these have little direct impact on the drug abuse problem, they provide a framework for the tight prescription system in Canada and control the diversion of drugs from pharmacies. We may take the pharmacy acts for granted, but countries without such acts have numerous problems controlling diversion of drugs from legal sources (Smart and Murray, 1981).

The Hazardous Products Act

The Hazardous Products Act of 1968-69 is not usually thought to be a piece of drug-control legislation, but it could be strengthened. It deals with consumer goods for household, garden or personal use, including most of the hazardous solvents that can be inhaled for kicks or to get high. It specifically excludes food, drugs, cosmetics and pest control products, but, of course inhalants are not officially drugs. The act sets out manufacturing, labelling, advertising, importing and retailing standards for products such as "adhesives, cleaning solvents, thinning agents and dyes containing toluene or acetone." Labels are required to state their hazardous nature and all products are

subject to search, seizure and analysis if found to contravene the law. The act does not prohibit possession or use of the products named once they are legally sold. However, if efforts were desired to control inhalants or solvents, the Hazardous Drugs Act would in all likelihood be the only one available federally. Revisions could presumably be made to forbid the sale of inhalants to minors, to require denaturing agents or the removal of lead. Including prohibitions on the use of solvents for inhalation would be more difficult, both practically and because the Hazardous Substances Act is a marketing rather than a health law.

The Food and Drugs Act

The Food and Drugs Act (1952-53) was constructed and revised to control drugs that are sold for treatment of diseases or for "restoring, correcting or modifying organic functions in men or animals and disinfecting premises or controlling vermin." The main drugs of abuse now included are depressants, stimulants and the hallucinogens. There are:

(i) *Controlled Drugs,* including amphetamines, barbiturates and non-barbiturate sedatives such as methaqualone as well as steroids;

(ii) *Restricted Drugs,* which refer to hallucinogenic drugs such as LSD, MDA, PCP, etc., which have no accepted medical usage;

(iii) *Prescription Drugs*, including those with stimulating or tranquillizing effects, e.g., Librium® and Valium,® and drugs requiring prescription for their use; there are penalties for selling these drugs illegally, but not for possession. Except for barbiturates and steroids, these drugs are not often sold illegally.

The Food and Drugs Act requires that controlled drugs be sold only by licensed manufacturers and distributors. They must have secure facilities for storing drugs and keep careful records of amounts bought, sold or manufactured. The records are

subject to regular inspection and licences are for one year only, with renewals being constantly required. The controlled drugs can be handled only by qualified personnel. Sales to the public are only by registered pharmacists on prescription from licensed practitioners (e.g., physicians, dentists, and veterinarians) or from licensed practitioners themselves. Physicians are allowed to prescribe these drugs for treatment only and not for "kicks," euphoria, or recreational purposes. Restricted drugs such as LSD have no accepted medical use and hence are not routinely available through pharmacies or practitioners. Prescription drugs are, of course, in regular use by physicians, but are not used much in the black market. Convictions for selling prescription drugs illegally are rare.

It is sometimes believed that the Food and Drugs Act is weaker than the Narcotic Control Act; however, many of the penalties are about the same for summary convictions. Table 33 shows the penalties for each category of drug and each type of offence. The offences are the same as for the Narcotic Control Act, except for "prescription shopping," i.e., obtaining a drug from a physician without disclosing another prescription obtained elsewhere during the past 30 days. There are penalties for trafficking and possession of controlled drugs for the purposes of trafficking; the penalties on summary conviction are a maximum of 18 months imprisonment and on indictment, 10 years. For restricted drugs, the penalty for possession is, for a first offence a fine of $1,000 or six months imprisonment, and $2,000 and one year imprisonment for subsequent offences. If the Crown proceeds on indictment, the fine can be $5,000 or three years imprisonment. For prescription drugs the only offence is selling, with lesser penalties for a first offence.

Convictions for young people under the Food and Drugs Act are far fewer than under the Narcotic Control Act. Only 509 convictions were registered in 1991, 50% lower than in 1987, and about 93% of those convicted were males. In 1991, almost all convictions were for LSD- or psilocybin-related offences, with only 13 for stimulants,

depressants and other hallucinogens combined (Table 34). Convictions for all drugs have declined since 1987. In 1991 young people (under 25) represented 59% of the convictions, about the same as in 1987 (61.7%).

In practice, penalties under the Food and Drugs Act are less than those under the Narcotic Control Act. Young people were less likely to receive a prison term under the FDA (34.3%) than the NCA (57.1%) and more likely to receive fines (46% vs. 30.4%).

The Narcotic Control Act

The Narcotic Control Act was proclaimed in 1961 by Parliament, and replaced an earlier Opium and Narcotic Drug Act dating back to 1929 and the Opium and Drug Act of 1911. The 1961 Act controls essentially the same sort of "narcotics" that were covered by the older acts and is consistent with the list covered internationally under the Single Convention on Narcotic Drugs.

People who look for rationality and consistency will always be disappointed in drug regulation. Neither of these "narcotic" acts use any scientific or pharmacological definition of narcotic, but simply lists the drugs covered and calls them narcotics. In practice, this subjects drugs which differ widely in effects and popularity to the same controls, e.g., heroin, cocaine, cannabis and PCP (a hallucinogen). As might be expected, the poor decision to include so many things in a narcotics law has been the cause of a public and legal outcry. The law currently covers cannabis, in all its forms; all opiates, such as opium, heroin, morphine, methadone, pethidine; plus coca and its derivatives, such as cocaine. Thus, some narcotics, some stimulants, some hallucinogens and some euphoriants are covered in the NCA, and some are in the FDA.

The NCA is complex, but basically it provides for the control of the listed drugs by the public at large. It specifies penalties for their illegal possession, possession for

the purposes of trafficking, trafficking, importing and exporting, and the cultivation of opium and cannabis. To enforce the act, police have special powers to enter and search premises and dwelling houses day or night, if there are reasonable grounds to believe they contain illicit drugs. It allows personal searches to be made without prior arrest. These provisions allow police greater latitude than in other criminal investigations, where search warrants must be given in daylight and occupants cannot be searched.

The 1961 revision of the NCA did away with offences such as those for opium smoking, as the practice had died out in Canada. It also removed the possibility of whipping as a penalty for any offence, the six-month minimum for possession and the provision that all occupants of any dwelling house were legally "in possession" of drugs found there. Most importantly, restrictions on the right of the medical profession to prescribe narcotic drugs to addicts were lifted. These had virtually prevented any development of treatment facilities for addicts. Not long after these restrictions were removed, facilities were established in both British Columbia and Ontario, and the whole approach to treating addiction in Canada changed. Methadone programs were introduced soon afterward.

Maximum penalties for offences under the Narcotic Control Act are summarized in Table 35. For possession (indictment), possession for the purpose of trafficking, importation and trafficking, life imprisonment may be given although it is rarely imposed in practice. A seven-year imprisonment is the maximum sentence for cultivation. Penalties for possession are up to $1,000 or six months in prison for a first offence and double that for second offences.

The NCA, as passed in 1961, contained a section which allowed for "preventive detention" in a penitentiary for an indeterminate period of time and for compulsory treatment in an institution operated under the Penitentiary Act, again for an indeterminate period. There was provision for provinces to establish custodial

treatment for addicts as well as for the federal government to do so. However, the section was never proclaimed and never came into force. Probably treatment centres would have been too costly, especially since effective treatments were unknown. Also, conflicts with provincial jurisdiction would have been created, since constitutionally treatment and health matters are concerns of the provinces in Canada. However, the lack of provisions for forced or voluntary treatment has often been criticized, as it limits curative treatment under the act and as a substitute for prison.

A few draconian measures have recently been removed from the Narcotic Control Act or its enforcement because of court challenges under the Charter of Rights and Freedom, or because of other court decisions. For example, the seven-year minimum prison sentence for importing was removed in 1985.

Writs of assistance have been abolished. These were standing orders allowing searches of dwellings to be made at any time and place with no need to get court approval. Warrantless searches have been found to be illegal and prior judicial authorization is necessary now. Earlier the drug laws allowed police to search anyone found in a place where there were illicit drugs, but under the Charter it is now necessary for police to believe that the person is in possession of drugs (Solomon and Usprich, 1991). Also, evidence obtained about a suspect in violation of the Charter of Rights may not be admissible in court.

Earlier, if charged with possession for the purpose of trafficking, the accused had to prove that he or she was not trafficking. However, this presumption of guilt was found to be against the Charter, and the prosecution must now prove its case. Despite these few changes in procedure, both Canadian drug acts remain strong repressive pieces of legislation with unusual powers of enforcement given to police.

Although Canadian drug laws remain very restrictive, they are less so than in some other countries. Comparisons with other countries are difficult because of varying historical and social factors. However, the study made for the World Health

Organization (Smart and Murray, 1981) of laws in various areas of the world provided information for 17 countries. Canada does not have the most severe penalties for any of the offences. Death is the maximum for trafficking and importing in Malaysia, Thailand, the Philippines, Nigeria and Singapore. A number of executions of drug traffickers have taken place in Malaysia, including both Malaysian nationals and Canadians. Several countries have maximums of 12 years for possession (Argentina, Philippines) compared to Canada's seven years. However, taking the three offences as a whole, Canada is well above average in the severity of maximum penalties allowed.

The New Omnibus Drug Act

In 1992 a proposed "omnibus" bill was introduced into Parliament, bringing the FDA and NCA together with some new provisions. It has been called the Psychoactive Substance Control Act, and will probably be passed in revised form by Parliament during 1993, as it is unlikely to be debated at length. As the current draft bill makes no major changes in existing penalties, it does not signal any trend towards decriminalization or a new way of looking at drug laws.

Some new drugs are added, including rarely used "designer drugs" (newly created stimulants, painkillers and tranquillizers) and look-alike drugs (drugs that mimic or resemble more potent substances). There are also new regulations for controlling the import or export of "precursors," or chemicals used in the making of drugs such as heroin or amphetamines. Provisions against money laundering have also been brought into the omnibus bill. At present the proposed bill is essentially a housekeeping exercise. If it remains in that form it will probably not have much impact on drug abuse or drug abusers in Canada.

Youthful Convictions Under the Narcotic Control Act

Since the NCA is so easily enforced, it is not surprising that many young people are convicted under it. The largest number of convictions would most probably be for cannabis offences, but data on those offences were not available after 1985. In that year there were 22,597 convictions, and the numbers had been falling for many years. There was a 38% reduction from 1978, seven years earlier. If we assume that the same reduction took place in the seven years between 1985 and 1992 there should have been about 14,000 people convicted in 1992, of whom about 60% or 8,400 would be under 25. Almost all (83%) convictions would be for simple possession, as in 1985.

Fortunately we have good data on convictions for drugs other than cannabis. Table 36 shows such data for young people. By far the largest category concerns cocaine convictions, involving 1,603 males and 276 females. Cocaine convictions increased up to 1989 or 1990 for females and declined thereafter. PCP convictions are also declining for both sexes. However, heroin convictions appear to be increasing. Young people account for 56.6% of the PCP convictions but only 27.2% of the cocaine and 14.3% of the heroin convictions.

Surprising numbers of Canadians are still going to jail for drug offences other than cannabis (Table 37). About 57% of those convicted under the NCA went to jail; a total of 1,193 people. Fortunately most of them were there for less than a year. However, there are other disturbing trends. Far fewer young people are receiving fines than in the past and more are going to jail (60% in 1991 compared to 31% in 1987). A minority (30.4%) got fines in 1991 compared to almost half (48.2%) in 1987. Conditional and absolute discharges mean that the offence did not take place. However, a criminal record is created which is more difficult to access than the normal records. Unfortunately, use of these discharges is infrequent and declining. Even with a discharge the RCMP keeps a record of the offence and local authorities also keep records. Probably few young people know about discharges, and their lawyers may

not make them aware of the possibility. Fortunately, suspended sentences are increasingly used but they still are given to only 11.1% of those convicted.

When it comes to imprisonment for cannabis in 1992, we do not have the actual data. However, we projected that there would have been about 8,400 convictions. Using the 1985 data, about 12% or 1,008 would have received jail terms.

If we calculate how many youth were spending some time in jail in 1992, it comes to 176 under the FDA, 1,193 for NCA drugs other than cannabis and an estimated 1,008 for cannabis convictions. The total of 2,377 seems very large for a small country like Canada; it represents all of the 15- to 24-year-olds you would find in a medium-sized city. These young people have their lives disrupted through both the court hearing and their subsequent jailing. Probably their schooling is ended, at least temporarily. Very few would be treated in prison for their drug problems, as few prison programs exist. Consequently, most will continue their drug use after getting out, and while in jail they may pick up other bad habits or criminal tendencies. When they come out of jail they will have both a criminal record and a prison record, which makes them less employable. Of course, the whole court processing and prison stay is expensive for the taxpayer, but we don't seem to have good estimates for Canada of just what it costs.

The system of jailing young drug users seems self-defeating, backward and uncreative. It is amazing that after all these years of drug wars and drug epidemics we still don't have any good alternatives. In Canada there are almost no curative treatment programs for youth in prison, nor any court diversion programs where youth can opt for treatment instead of incarceration. Such programs exist in the U.S. and some have been found to be effective. Certainly a few trials of such programs are in order in Canada.

Drug Offences in the Criminal Code

Rather than open up the old drug laws and add to them, Parliament has added several new drug offences to the Criminal Code. There is a new "money laundering" offence which makes it illegal to conceal or convert the proceeds of drug operations involving trafficking, importing, exporting and cultivation. This probably has little impact on young people, who rarely gather such proceeds in any large amounts. In practice it has been difficult to prove money laundering and few convictions have been made.

Several new provisions which might affect young people are those dealing with drug paraphernalia (e.g., pipes, spoons, burners) and literature promoting drug use. It is illegal to sell, import, manufacture or distribute these items, but not to buy or possess them. These provisions were introduced to counter the large numbers of "head shops" selling paraphernalia and "how to do it" books for potential makers of drugs such as "crack" cocaine. The penalty for a first offence is greater than for possession ($100,000 fine), and subsequent offences can lead to a fine of $300,000. Few convictions have been made and one store owner in London, Ontario, has frequently flaunted the law by selling books on growing cannabis. He is reportedly hoping to be charged but has not received the privilege yet. As the defence would be under the "free expression" provisions of the Charter, the "drug paraphernalia and literature" provisions may not survive a court test. This may be why charges have not been laid.

The Young Offenders Act

People aged 12 to 17 in Canada come under the Young Offenders Act, which was passed in 1984 and came into force in 1985 (Leschied et al., 1991), replacing the earlier Juvenile Delinquents Act, which was oriented more towards child welfare than the law. Proceedings are conducted in a specially designed youth or family court. The

YOA holds youth responsible for their crimes as if they were adults and it offers all of the legal rights. Youth have a real trial, with legal representation, a jury if needed, and rules of evidence in force.

Much criticism has been levelled at the YOA for generating proceedings that are legalistic rather than child-oriented (see Leschied et al., 1991 for a review). Also, a very limited number of treatment orders have been given — only five in 1986, compared to 200 in the last year of the Juvenile Delinquents Act (Leschied and Gendreau, 1986). Probably this neglect of treatment also applies to youth convicted of drug offences, but we do not have the details. Unfortunately, this trend towards more detention is what we saw with the FDA. In general, youth in Canada with drug problems are probably getting more detention and less treatment than before 1984.

In 1990 there were 3,851 juvenile offenders convicted under the drug acts in Canada. About 83% of convictions involved cannabis and 7% cocaine, with all other drugs being much less important. It is appalling to think that those youth were more likely to get protective custody than a chance at treatment.

The Need to Change Canadian Drug Laws

During the past five years there has been an explosion of sentiment that the drug laws should be changed. Much of this sentiment seems to be in the U.S., but some of it has passed into Canada. In 1989, Ethan Nadelman (1989) published a very influential paper in *Science* on drug prohibition in the U.S. This paper advocated drug legalization and exploration of several models as options for reducing the drug problem. Criminal justice approaches were seen as both limited in effect and extremely costly. Nadelman also questioned the morality of the drug laws, which protect no victims and have no moral standing in a society that promotes alcohol, tobacco and other legal drug use. Since that paper, many similar criticisms of the drug laws have been made by scholars in the U.S. and Canada (e.g., Rosenbaum,

1990; Single, 1989; Reuter and Haager, 1989; Giffen et al., 1992; Erickson, 1992), although many police and enforcement agencies continue to insist that strict drug laws are necessary to control the drug epidemic (RCMP, 1990; Health Protection Branch, 1992; Ministry of Supply and Services, 1988).

In the late 1970s and early 1980s there seemed to be general recognition that the cannabis laws required change in Canada, but there was little agreement about what should be done and how. Changes were recommended by the Le Dain Commission on Non-Medical Use of Drugs in the early 1970s. Public opinion also seemed to favor change. All political parties in the 1978-1983 era said that they wanted softer laws and indeed many proposals were brought forward. Virtually every Canadian Parliament was told they would be presented with new legislation about cannabis, but such legislation was never passed. One problem was that the government wished to soften the legal penalties, especially for possession and importing, without appearing to approve the use of cannabis. Unfortunately, no good way seemed to be found to do that and the excitement about imminent changes has largely disappeared.

It has been recognized for a long time that in the United States reductions of penalties for possession to small fines has not led to an increase in cannabis use (Single, 1981; 1989). However, many were not sure that the same results would be obtained in Canada. Cannabis use was at a lower level here than in the U.S. Some were concerned that Canadians might be more prone to listen to a message from the government implying that cannabis use was not harmful — even such a vague message as "cannabis does not need as large a penalty as it did in the past." Also, some people worried that Canada would become a mecca for cannabis users if the law was not changed in the U.S. at the same time. When Holland stopped enforcing the laws for cannabis possession there certainly was an influx of foreign drug users (Dean, 1989), although local use did not seem to increase.

At present, the push to change the drug laws seems to have weakened in Canada. There is no national debate on the issue. Parliament seems uninterested in it and the topic seems to be largely off the public agenda. There are probably several reasons for this. One is Canada's Drug Strategy, announced in 1987, which proposed to spend about 32% of new funds on prevention, 38% on treatment and 20% on enforcement and control. The original allocation (Ministry of Supply and Services, 1988) was $210 million for five years, and $270 million has been added for the five years after 1992. The strategy represents a large and ambitious undertaking in all areas related to drug use. However, softening the drug laws was not part of the plan. Apparently, government officials and parliamentary members feel that the emphasis should be on prevention and treatment, rather than on making the drug laws less strict. The new strategy was a response to reputed drug epidemics (especially of cocaine), and therefore softening drug laws was simply not appropriate as part of the strategy.

Another consideration is that drug use and problems have been declining among students and the general population. The reduction in cannabis use and convictions has been remarkable in Canada. At the height of the interest in changing the laws in the early 1980s, cannabis use was two to three times as high as now. Probably the feeling at present is that the drug problem is largely solved or on the road to being solved and does not need major legal changes. In a recent opinion survey in Ontario, only 5.2% had a friend or relative with a cannabis problem, but 50% said that people should get a criminal record if caught with cannabis and 74.7% said this should happen if they were selling it. About 45.3% thought people should get a criminal record for possessing cannabis, 34.6% said they should get only a fine and 15.5% said it should not be an offence. These results indicate that there is no great public support for changing the current laws, especially for removing penalties altogether.

Government officials are probably aware of the current public attitudes about drug laws and see no need for change.

An additional consideration is that over the past 10 years some of the worst aspects of the drug laws and their enforcement have been softened, although not enough for everyone's taste. Probably fewer cannabis users are convicted and fewer go to jail. However, more of those convicted under the FDA go to jail. The seven-year minimum for importing/exporting has been removed. Warrantless searches have been made illegal. Also, the reverse onus clause has been removed from the section on possession for purpose of trafficking. In the 1970s these were among the major concerns of those critical of the Canadian drug laws. That some concerns have been satisfied may seem to mitigate the need for further changes in drug laws.

Despite this, arguments can be made for changing the Canadian drug laws. The major arguments have been made by observers such as Erickson (1992), Boyd (1983), Solomon and Usprich (1991), Single (1989) and others in Canada. The major arguments can be summarized briefly, as we have already mentioned most of them:

(i) Current laws do not have much specific or general deterrent effect. They do not dissuade many potential users from trying drugs, nor do the penalties discourage most of those convicted from continuing their use. However, such laws many have symbolic value with intangible long-term effects.

(ii) Maintaining drug enforcement activity is very expensive. Billions of dollars are spent on police, customs and army activities in disrupting the flow of drugs. In addition, police, courts, jails and social workers deal with the consequences of arrest and conviction. Nadelman (1989) estimated that $10 billion was spent on the enforcement of drug laws in the U.S. in 1987. Probably the expenditure in Canada was around $1 billion, as we have about 10% of the population of the U.S. and drug laws that are at least as strict. However, we do not have good estimates of

the total amount spent on drug law enforcement in Canada. Whatever the expenditure is, many feel that the money is largely misspent, given the lack of a deterrent effect on users and an impact on drug supplies.

(iii) Having illegal drugs for which there is great demand means that drug users commit robbery and burglary, and deal in prostitution to maintain their habits. If drugs were free or cheaper, much drug-related crime would probably be reduced.

(iv) Drug traffickers become a large force in society, contributing to violence and intimidation for the public and to the corruption of police and enforcement agencies. A number of drug enforcement officers in the United States and Canada have been convicted of protecting drug dealers and selling stolen drugs themselves. A single drug deal of modest size can net a police officer more than a year's salary (Erickson, 1992).

(v) Drug traffickers develop enormous wealth, enough to have their own armies, bomb-making factories and terrorist networks. They are sufficiently powerful and aggressive in some Latin American countries to kill or silence political opponents, including presidents, mayors and ministers of justice. Recently, (*Globe and Mail,* 1993) Pablo Escobar, a Colombian drug trafficker, "threatened bloody bomb attacks against embassies, the press and law enforcement agencies in Colombia if the government does not accept new conditions for his surrender...including a multinational force of guards, a refusal to accept any other jail except a police training school in a suburb of Medellin that he controls and...changes in the cities' police commanders." Demands of this type lead people and governments to be demoralized about the drug user and to think it is not worth winning at the costs that seem to be necessary.

(vi) People are criminalized for relatively trivial crimes such as possessing a cannabis joint or a few grams of cocaine. These are victimless crimes in that the buyer does not bring charges or encourage police activity against the seller or

distributor. Many people, especially young people, spend time in jails for drug crimes; that time could be better spent in school, at work or in community service.

Some Options for Changing Canadian Drug Laws

Numerous possibilities for changing the drug laws have been proposed. For the sake of simplicity I have reduced them to three — legalization, decriminalization and amelioration:

Legalization

In the 1980s, serious scholars began to call for the legalization of all drugs, not just changes to make the laws a little softer. When in the 1970s people discussed decriminalizing cannabis laws, they usually meant dropping the possession offence for those having small amounts. However, in 1989 Nadelman stated that "legalizing cocaine, heroin and other relatively dangerous drugs may be the only way to reverse the destructive impact of drugs and current policies in the ghettos." He did state that "the first step is relatively risk-free: legalization of marihuana." "Legalization" could mean that drugs would be sold like ice cream. However, most proponents seem to want a licensing system for adult purchases only, or a government marketing arrangement as for alcohol in monopoly states and provinces. Probably everyone would agree to drug legalization if it would cure the problems discussed above and bring no further problems.

The major further problem would likely be increased levels of consumption for all drugs and a much larger number of people harmed by heavy drug use. We don't know how large the increase might be, as no earlier experience helps us much. The best estimate might come from the lifting of prohibition of alcohol consumption. Rates of alcoholism deaths increased by about 40% in Canada in the five years after prohibition was ended. However, alcohol was a very popular drug before prohibition,

whereas cannabis, cocaine and heroin are not and perhaps never could be, and most drugs do not lead to specific physical diseases for users. Risks for youth could be considerable under legalization. If youth were excluded from buying drugs from government stores, a black market would develop for them, and their access to drugs might increase. Certainly being under age for drinking has not prevented young people from acquiring alcohol and it would not do so for drugs either. Since we don't know by how much use would increase, and as drug use is now decreasing, no Canadian government is likely to take a chance with legalizing drugs.

Decriminalization

Decriminalization was first used as a concept to reduce the harmful effects of cannabis laws. In the 1970s it was never seriously proposed for drugs such as heroin and cocaine, which are thought to be more harmful and dangerous. As stated earlier, it is often argued now that all illicit drugs should be treated in much the same permissive way. We do not have any clear idea about whether the public and political leaders in Canada would favor decriminalization for all drugs. Our best information relates to cannabis. In a recent attitude survey (Room, 1992) in Ontario, 45.3% of adults thought that for possession of small amounts of cannabis people should get a criminal record, 34.6% a fine only and 15.5% said it should not be an offence. However, 74.7% said people should get a criminal record for selling an ounce of cannabis. There is some support for changing the laws for cannabis possession, but few want total decriminalization. Most people want selling cannabis to be a crime.

If possession of drugs were made punishable only by a fine, variation in sentencing allowed would be reduced and the use of imprisonment prevented. Fines might be substantially decreased, as in some states south of the border, to the level of parking fines. A special record-keeping system could be developed to handle such fines, one not involving fingerprinting, photographing and long-term storage, as

required under the Criminal Code. Such systems exist for parking offences and other minor delinquencies.

Accepting this option would probably mean that the number of charges laid would decrease. Police might find it an unattractive area in which to work and hence lay fewer charges. Decriminalization in the U.S. did lead to very substantial savings as police were shifted to other jobs (Single, 1989). We should remember too that in Canada arrests and convictions are decreasing for most types of drugs, and legalizing drugs in the 1990s may not have the same effect as it would have had in the 1970s.

Pardons and discharges could also be more readily available than at present if penalties were lower. Records for pardoned persons are separately filed and cannot be revealed without the Solicitor General's approval. However, changing all local and provincial records would be more difficult. Absolute and conditional discharges are already given in Canada and they could be used more often without the need for new laws.

Decriminalization sometimes means that individuals would be allowed to possess small amounts of cannabis material or even a few cannabis plants for their own use. A reasonable amount would be difficult to fix and might depend upon a knowledge of the user. For example, should an infrequent user be allowed only a few grams while a daily user is allowed a few ounces? This would very greatly reduce the number of convictions and mitigate the criminal record consequences. It is unlikely that Canadian law would ever allow the possession of large amounts of any illegal drug.

It has been suggested (Single et al., 1980) that this provision should be combined with "proposals designed to discourage use and to indicate the government's disapproval and concern." Presumably this would involve some sort of large educational or mass media persuasion. Alaska has taken this option and it appears that cannabis use has not increased there. Also, cannabis possession is not punished in the

Netherlands and cannabis sales are even tolerated in some bars — changes that did not result in increased cannabis use among students there.

A major concern about repealing the law which makes possession an offence is that drug use might greatly increase, perhaps to levels never before imagined. Without solid assurances that increases in use would be minimal, it is not likely that Canadian governments would repeal the possession offence. This is particularly the case because evidence of adverse health consequences attributable to cannabis has increased greatly over the past decade. Fear of health consequences is one of the major factors in declining cannabis use among students.

Amelioration

Given the continuing decline in drug use in Canada and current attitudes and social realities, the best option is probably to ameliorate the current drug laws without drastically changing them. The major problems that need fixing are the heavy jail terms and criminalization of young drug users. In order to fix them we need to change attitudes towards drug users to see their problems as more health related than legal. Some people convicted of drug offences are infrequent users who were unlucky and got caught. However, many others have moderate to severe drug problems that require treatment, self-help or family intervention. My suggestion is that we change the drug laws to a small fine for possession of drugs on the first offence, with the fine graded according to the amount. On subsequent offences an assessment should be made of how serious the user's drug problems are. If there is evidence of addiction, dependence or serious social problems, the person could be offered treatment or a self-help program with some monitoring as an alternative to a court appearance. On third and subsequent offences, drug abuse treatment inside a jail or outside on probation would become options, to be decided by the courts based on a detailed pre-sentence report. Hopefully, most treatment of drug offenders could be undertaken

outside of jail, for all types of offenders. Jail should be retained as an option for the most dangerous recidivist offenders. These changes would not be easy to implement, especially at a time when health budgets are being decreased. Unfortunately for provincial health services, they would mean that thousands more drug users would require assessment and treatment. The numbers needing assessment are difficult to estimate, but could account for 10-20% of the current convictions, or about 2,400 to 4,800 people. In many provinces special new assessment and treatment centres would be needed. However, in the long run alternatives to jail would help to reduce the drug problem.

In order to make sure that the government does not seem to be approving of drug use by changing the laws, it would be necessary to create and maintain public education and school programs making people aware of the adverse consequences of drug use.

Summary

Canadian drug laws are complex and more oriented to law and order than treatment of offenders. Some of the most draconian provisions have been changed but many strict ones remain. About 9,000 young people each year are convicted for drug offences, plus about 3,851 juvenile offenders. The proportions spending time in jail are increasing. There is a recognition that Canada's drug laws have been softened over the past years but that has not done away with incarceration for many young people. It is still unlikely that young offenders will get treatment during their incarceration or probation. We need changes to the drug laws that recognize health concern as an issue in sentencing. We need more treatment programs as alternatives to jail and we need the methods to get youth into those programs.

Table 30

Some Data From The Ontario Student Survey, 1989, Relevant to Deterrence from Cannabis Use

	% of Students Responding
Ever used cannabis	30.1
Ever arrested - once - more than once	.3 .1
Reason for not trying - "it's illegal"	1.2
Reason for stopping - "trouble with police"	.3
How likely police would catch you if you used very unlikely or unlikely	79.2
Most serious consequences if you used cannabis get caught by police parents will find out health problems	 23.6 40.4 36.0
How likely are you to use cannabis next year likely or very likely[1]	37.1

[1]Data from this question are from 1991 as the question was not asked in 1989.

Table 31

In the Past 12 Months How Often Have You Felt Pressured To Try Drugs?

	Alcohol	Cannabis
Never offered	26.5	70.4
Offered; never pressured	62.3	24.6
Pressured on 1 or 2 occasions	8.2	3.9
Pressured on 3 or 4 occasions	1.3	.7
Pressured on 5 or more occasions	1.7	.4

Source: Smart, R.G. et al. Ontario Student Drug Use Survey, 1991.

Table 32

The Availability of Psychoactive Drugs in Twenty-Three Countries

Country	Plants Cultivated	Original Manufacture	Repackaging	Prescription System
Argentina	Various hallucinogenic plants including piptademia, datura, coca	Yes	Yes	Yes
Australia	Cannabis, papaver, somniferum	Yes	N.S.	Yes
Bangladesh	Cannabis	No	Yes	Yes
Canada	Cannabis	No	Yes	Yes
Finland	None	Yes	N.S.	Yes
France	Opium poppy plant	Yes	Yes	Yes
Hong Kong	Not stated	N.S.	N.S.	Yes
India	Opium poppy plant, cannabis, ganja	Yes	N.S.	Yes
Indonesia	Cannabis	No	Yes	Yes
Ireland	None	No	Yes	Yes
Japan	Many plants including opium poppy plant	Yes	Yes	Yes
Kenya	Cannabis, khat	No	No	Yes
Malaysia	Not stated	Yes	Yes	Yes
Mauritius	Cannabis	No	Yes	Yes
Mexico	Opium poppy plant, cannabis, peyote	Yes	Yes	Yes
Nigeria	Cannabis, kwaya	No	Yes	Yes
Pakistan	Opium poppy plant, cannabis	No	No	No
Peru	Coca, cannabis, papaver datura, banisteria	No	Yes	Yes
Phillipines	Cannabis	Yes	N.S.	Yes
Poland	Opium poppy plant	Yes	N.S.	Yes
Singapore	None	No	No	Yes
Togo	Cannabis	No	No	Yes
United Kingdom	Cannabis	Yes	Yes	Yes

N.S. = Not stated.

Table 33

Penalties Under the Food and Drugs Act

Drugs	Offence	Penalties
Controlled drugs (amphetamines and other stimulants; barbiturates and other depressants) Schedule G	Possession for purpose of trafficking, and trafficking	Summary conviction - 18 months indictment - 10 years
	Prescription shopping	summary conviction - 6 months or $1,000 fine - first offence subsequent offence - 1 year or $2,000 fine indictment - 3 years and $5,000 fine
Restricted Drugs (LSD, MDA, PCP and other hallucinogens)	Possession	As above for prescription shopping
	Possession for purpose of trafficking, trafficking	summary conviction - 18 months indictment - 10 years
Prescription Drugs (tranquillizers, painkillers, steroids and other drugs not sold over the counter)	Selling	Summary conviction - first offence 3 months and $500 fine - subsequent offence 6 months and $1,000 fine - indictment 3 years and $5,000 fine

Table 34

Convictions Under the Food and Drugs Act for People Aged 15 to 24 for 1987-1991

	Stimulants, e.g. Amphetamines	Depressants, e.g. Barbiturates	LSD	Psilocybin	Other Hallucinogens
1987	22	4	597	449	4
1988	18	4	499	444	0
1989	18	0	597	305	0
1990	5	0	463	286	0
1991	9	2	297	199	2

Table 35

Penalties Under the Narcotic Control Act

Offence	Maximum Penalty
Possession (summary conviction)	$1,000 or 6 months imprisonment or both for first offence; $2,000 and/or imprisonment for 1 year for subsequent offence
Possession (indictment)	Life imprisonment
Possession for Purpose of Trafficking (indictment)	Life imprisonment
Trafficking (indictment)	Life imprisonment
Cultivation (indictment)	Seven years
Importation/Exportation (indictment)	Life imprisonment
Prescription Shopping	Six months or $1,000 fine or both for first offence One year and $2,000 fine or both for subsequent offence

Table 36

Trends in Convictions for Cocaine, Heroin and PCP for Those Aged 15 to 24

	Cocaine		Heroin		PCP	
	Males	Females	Males	Females	Males	Females
1987	1258	215	26	10	113	17
1988	1579	284	43	6	131	17
1989	2164	349	52	10	95	22
1990	2011	368	42	20	52	11
1991	1603	276	42	16	95	11

Table 37

Sentencing Trends in Convictions Under the Narcotic Control Act* For Those Aged 15 to 24: Numbers and Percentages (in Brackets)

	Fine	Suspended Sentence	Absolute Discharge	Conditional Discharge	Time Less Than 1 Year	Time More Than 1 Year	Totals
1987	886 (48.2)	113 (6.1)	22 (1.2)	49 (2.7)	580 (31.5)	190 (10.3)	1840
1988	1096 (49.8)	166 (7.5)	16 (.7)	52 (2.4)	698 (31.7)	175 (7.9)	2203
1989	1086 (39.1)	157 (5.7)	15 (.6)	43 (1.6)	1125 (40.1)	352 (12.6)	2778
1990	849 (32.8)	207 (8.0)	9 (.4)	83 (3.2)	1168 (45.1)	273 (10.5)	2589
1991	634 (30.4)	231 (11.1)	6 (.2)	24 (1.1)	965 (46.2)	228 (10.9)	2088

Source: Bureau of Dangerous Drugs, Ottawa
* Not including cannabis for which conviction data are not available.

Chapter 12

Where Do We Stand Now, Eh? Some Conclusions and a Summary

The aims of this book were to describe youthful drug use in Canada and the efforts to prevent and treat it. Another important aim was to describe the special characteristics of youthful drinking and drug use compared to that of older people. We need, too, an understanding of what further research work is required to keep abreast of trends in drug use and the best methods for prevention and treatment. In a sense, this concluding chapter is a report card for Canada on its efforts at ameliorating youthful drug abuse. Overall, the report card is positive in that drug use is declining and many programs have been established, but several areas still need to be improved.

Canada has become a world leader in research on youthful drug abuse. We have a large number of national and provincial monitoring studies that examine the extent of alcohol and drug use and their problems. In addition, Canada is a recognized leader in health promotion research and prevention programming and evaluation. However, we have fewer studies of treatment efforts and a relatively weak understanding of how many people are treated for drug problems in Canada and what treatment they receive. Unfortunately Canada is known as a country that is tough on drug users and imposes a law-and-order approach rather than a health-oriented one. Given this general assessment we can reach a number of conclusions about what we know already, what still needs to be done in research, and the best policies to pursue to deal with the youthful drug problem now and in the near future.

First, a brief summary of what we know already:

Drinking and Drinking Problems

Most young people drink, but do so relatively infrequently. About 60-70% of students drink, but 90% of those aged 20-24 drink, and nearly all university students drink. Typically young people do not drink daily (1% or so do). However, young people prefer to drink large amounts on special occasions and get drunk. About 20-25% of young people are getting drunk once a month or more. Far more males than females drink heavily, and more get drunk. Despite these findings there is an overall decline in drinking, daily drinking and number of drinks taken by students. Young people drink less and have fewer problems than older people but tend to drink large amounts on their few drinking occasions.

There is no decline in the proportions of drinkers who drink five or more drinks on a single occasion, or those who have problems from drinking. About 20-25% of young people have an alcohol problem that requires help. Although the trend in most alcohol problems among youth is downward, we have about the same proportions of serious problems, e.g., those requiring medical attention, among drinkers. Even if problems do not seem to be decreasing among drinkers, there are fewer drinkers and hence somewhat fewer problems among youth in general.

Youth also become victims of other people's drinking when exposed to violence in the family or to intra-uterine effects such as the Fetal Alcohol Syndrome. We do not know whether victimization of youth because of parental drinking is on the increase. What is worse, we have poor estimates of the total numbers of youth affected by FAS or FAE in Canada. They seem to be especially large problems for some native Canadian groups.

Drug Use and Problems

In the 1990s we became inured to the idea of drugs being available in schools and to the media-created "drug epidemic." Although crack came on the scene in the mid-

1980s, the use of most drugs declined. Almost all types of illicit drug use declined among students; for some drugs such as cannabis, the declines were remarkable (from 31% to 12% between 1979 and 1991). Multiple drug use has also declined, as has smoking. However, the proportion of heavy drug users is not much lower. It appears that among sophisticated students, much social or recreational drug use has gone out of fashion, but we are left with a hard core of heavy drug users whose problems will be difficult to solve. They are probably not easily influenced by persuasion or educational efforts but will require treatment or other types of intervention. About 4% of students have drug problems that require intervention, whether professional or non-professional or their own self-help efforts.

There are very serious alcohol and drug problems among high-risk populations such as street youth. Those groups have alcohol and drug use rates up to 10 times as high as those their age in school. Their drug problems are rarely treated and many need a wide variety of social, family and treatment services. We should therefore avoid the illusion that drug use among youth is disappearing or even becoming a less important issue.

Balkanization of Efforts

In Canada, as in many federal systems, there are several levels of government attempting to deal with alcohol and drug problems. We have 10 systems of health care, plus those in the Northwest Territories, and the same number of provincial educational systems. Treatment and education for alcohol and drug problems are largely under provincial control but at the federal level for native people and the military. We also have many provincial systems of alcohol control and many different agencies providing prevention and treatment services. At present, Alberta, Ontario, Prince Edward Island and Manitoba have separate provincial agencies or foundations which deal with drug issues where other provinces use sections of the Ministry of

Health. There is no strong federal effort to set drug education or treatment standards or even to monitor activities in those areas. However, the "National Drug Strategy" initiative has supported community groups offering drug education, and Health and Welfare Canada has undertaken several mass media programs on drugs. Generally, however, both alcohol and drug education and treatment are provided at provincial and local levels, with little overall co-ordination. That makes it difficult to understand what programs are in place and how effective they are.

More Emphasis on Treatment

The availability of treatment for young people with alcohol and drug problems seems sporadic in Canada, although good information does not exist for treatment levels and needs in most provinces. Also, very few evaluation studies have been done to tell us which treatment approaches are best for young people. We know that there are many unmet treatment needs, especially for high-risk youth. For example, only a minority of street youth with drug problems are actually getting treatment. We also have little information about how many youth use self-help groups such as Alcoholics Anonymous or Alateen. Not surprisingly we also know little about how effective these groups are for youth. Generally, we do not know how many youth with alcohol and drug problems are getting the treatment they need, nor do we know how much more treatment or what type of treatment is needed.

Alcohol and Drug Education in Schools

Schools have taken over many of the socializing roles formerly left to parents. One of those roles assumed somewhat reluctantly has been to educate youth about the hazards of drug use. Often teachers and schools are inadequately prepared for this role and the best programs are not always available. Most reviews of drug education in schools show positive effects on knowledge and attitudes but fewer effects on actual

drug use. Multi-model programs seem to be most effective. Our study of students in Ontario showed a close correlation between increased alcohol and drug education and declines in drinking and cannabis use.

Probably, most old-style classroom programs of drug education will not be very effective, especially in influencing heavy drug users. More emphasis is needed on comprehensive approaches combining classroom drug education with early intervention for heavy drug and alcohol users and disciplinary action in schools, establishing the rules for drug use at school. We should continue these comprehensive programs and carefully evaluate their effectiveness.

Help From The Mass Media

Most people seem to believe that the mass media, through advertising and programming, contribute greatly to the tendency of young people to drink. Generally, research does not show that alcohol advertising or television scenes where alcohol is imbibed contribute to young people's drinking. However, the results are not based on long-term exposure to alcohol ads or programming.

Anti-alcohol and anti-drug use campaigns do not seem to be very effective in discouraging drinking or drug use, but very few studies have been made, especially of drug use. There is a need for more research on how mass media and advertisement programs can encourage safe drinking and drug use.

Government and Non-Government Policies on Alcohol and Tobacco

Many governments, non-government agencies and families can and do establish policies about youthful drinking and drug use. Some of these are for controlling tobacco consumption and are therefore beneficial on public health grounds. Tobacco sales are really not defensible at all, and should be phased out completely. Alcohol

sales to young people are barely defensible but there is little enforcement of laws prohibiting underage drinking.

An ultra-slow and cautious approach to new alcohol controls for youth seems to be the order of the day. Canada has not introduced warning labels on alcoholic beverages as in the United States and seems unlikely to do so. Limited driving licences have not been introduced for young people and the legal blood alcohol level has not been reduced, despite evidence suggesting these measures could be effective. Also, there are no current large mass media programs discouraging heavy drinking or drunkenness by youth. There is a need in Canada to establish all of these programs in the near future.

Legal Approaches to Drug Abuse

It is probable that illicit drugs will always be handled differently than alcohol and tobacco. Canada has a strong tradition of a "law-and-order" or tough approach to drug controls for youth and other people as well. Suggestions that illicit drugs be legalized are unlikely to be acted upon soon in Canada. This is partly because the laws have recently been made less harsh, but also because of the National Drug Strategy, which emphasizes treatment and education rather than the amelioration of the current drug laws. About 2,400 young people are still being put in jail each year for drug-related offences. They are probably wasting their time there and developing bad (i.e., criminal) habits at the same time. We have no good alternative to imprisonment for drug users based on public health approaches, and efforts to study treatment alternatives to jail for these users are needed as soon as possible.

What Are the Most Important Research Needs for the Future?

Most social problems such as alcohol and drug problems are so complex and need so much study and programming that good solutions are never easy to find. Although much progress has been made in studying drug abuse in Canada and in providing treatment and prevention programs, the problems are far from solved. For the near future I suggest few changes, rather than a large number which will never be taken seriously or will be too difficult to institute. The major needs I see are:

1) Continued monitoring of trends in alcohol and drug use among youth, especially monitoring of the social, physical and family problems associated with heavy use. There is also a need for an ongoing national study of alcohol and drug problems among students. No such study exists now and a national picture of student alcohol and drug use is very difficult to get. We also need better trend studies of how alcohol and drug use by adults victimizes youth in Canada.

2) Better and more extensive research on high-risk groups such as young native Canadians, the mentally ill and the children of alcoholics and drug abusers.

3) Continued provision of treatment facilities for youthful alcohol and drug abusers, and much more research on how to improve those treatments. There is a need for a national system with data on the numbers and types of people in treatment and their success in overcoming their problems.

4) Good, comprehensive alcohol and drug education programs in most provinces. These should focus on early intervention for heavy users and those at high risk for later drug abuse, as well as on classroom education. Careful monitoring will be

necessary to assure that the programs are effective and that they actually lead to reduced alcohol and drug use among students and other youth out of school.

5) Some alternatives to the jailing of youth for drug-related crimes. Such alternatives could be fines, community service or treatment programs for young people with serious problems. To make such alternatives acceptable and workable we need changes in public attitudes to redefine drug use, especially heavy use, as a health problem rather than a crime.

6) Extensive mass media efforts to remind youth and parents that alcohol and drugs are dangerous, particularly in large amounts. A focus of these efforts should be to assure youth that counselling, self-help and treatment are available for drug abuse and how to find such help. The mass media approaches should also focus on defining heavy alcohol and drug use as a health rather than a legal problem.

7) More emphasis on controlling the availability of alcohol and tobacco via price increases and enforcement of laws on under-age sales. These should lead eventually, but soon, to a ban on tobacco sales altogether. Alcohol sales will probably continue but government, family and non-government policies should be established to reduce heavy drinking and under-age drinking among youth.

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Published by the Addiction Research Foundation, 1993